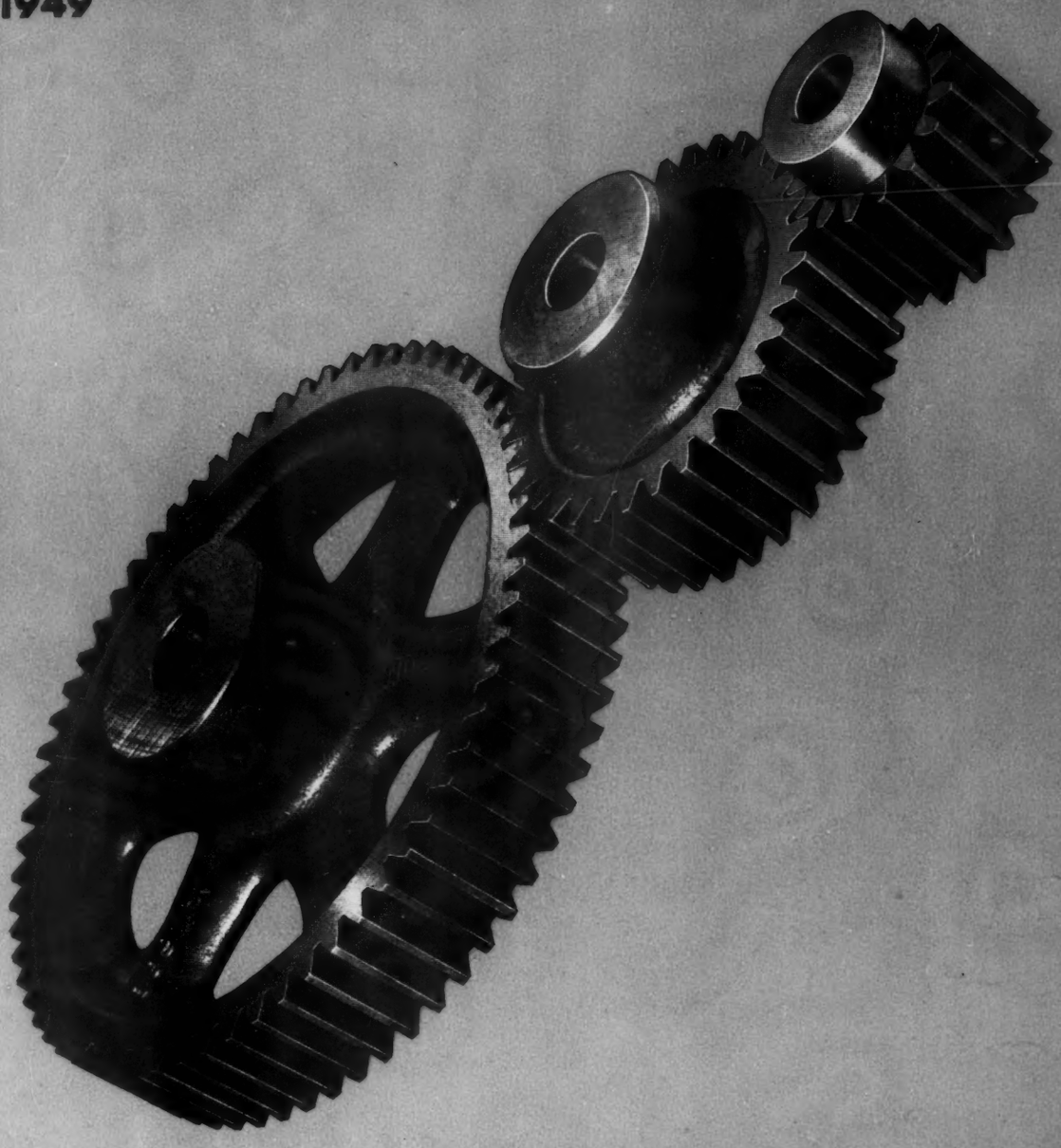
JUNE 1949



PRINTING EQUIPMENT *Engineer*

when you
"GO OFFSET"

. . . Talk with a man who owns a HARRIS 17 x 22 offset press

WHEN YOU START to think about going offset . . . as you may be right now . . . do yourself a favor . . . talk to a friend who owns a Harris 17 x 22″ offset press.

He will tell you why more printers, in combination shops and straight offset shops, are buying Harris presses than any other make. He will tell you it's because of Harris STREAM FEED that makes for finer register. He will tell you it's because the Harris press has MORE ROLLERS, which makes for smoother inking. He will tell you it's because of other Harris features such as single-point press control, automatic four-way protection, receding pile delivery and many others. They are features that mean easier operation, better quality work, more impressions per hour . . . all of which adds up to greater printing profits.

Get *a better run for your money.* Ask the man who *knows* . . . a Harris owner. WHEN YOU GO OFFSET, you'll GO HARRIS, too!

HARRIS 17 x 22

SINGLE COLOR OFFSET PRESS

speeds up to 7000 an hour

WITH HARRIS STREAM FEED (illustrated right) there is no bounce, no dented edges. Four full-size sheets are moving down the feed table, ready for their turn at register. The lead edge of the second sheet is only 7½ inches away from the front guides when the first sheet is being taken by the grippers. All following sheets move up to register in this order, allowing more time for register at faster press speeds.

HARRIS-SEYBOLD

General Offices — Cleveland 5, Ohio

The Morrill Ink Service Plan assures the prompt delivery of newspaper inks in the quantity required—where and when needed. To shorten the distance between your plant and Morrill's strategically located supply points, eleven modern trucks have been added to the Morrill delivery fleet. This method of transportation is supplemented by railroad tank cars and box cars.

For over a century Morrill has set the pace in manufacturing newspaper inks, in black as well as color, to satisfy exacting pressroom requirements and improved printing processes. This background of research and practical experience is at the service of all newspaper pressmen.

GEO. H. MORRILL CO.

DIVISION OF SUN CHEMICAL CORPORATION

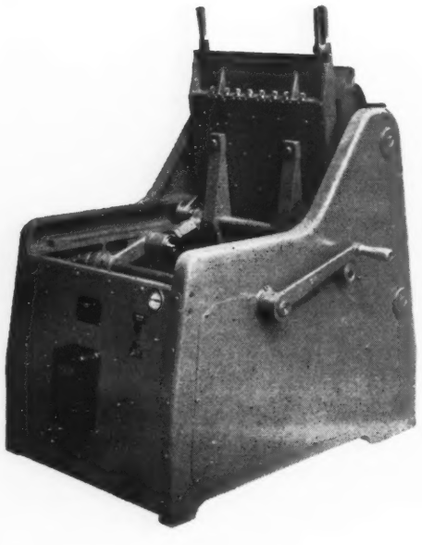
10TH STREET & 44TH AVENUE, LONG ISLAND CITY 1, N. Y.

BOSTON • CHICAGO • DETROIT • MINNEAPOLIS • ST. LOUIS
FORT WORTH • SAN FRANCISCO • LOS ANGELES • SEATTLE • TORONTO, CANADA

STA-HI

MASTER FORMER . . . Universally accepted as the one machine to do a perfect job of forming and electrically baking dry mats, properly preparing them for trouble-free casting of newspaper plates.

PREMIER ROTARY SHAVER . . . The choice of progressive newspaper and commercial plants the world over for fine, precision shaving of flat plates. Just ask the man who operates one!

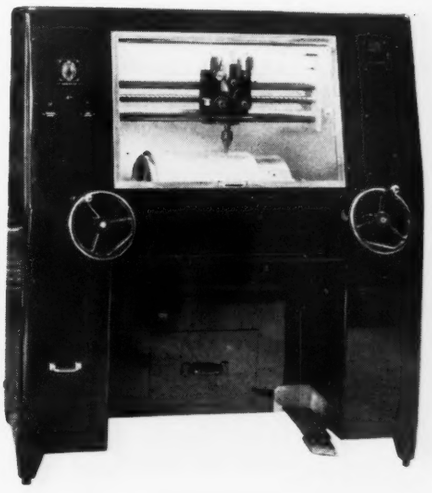


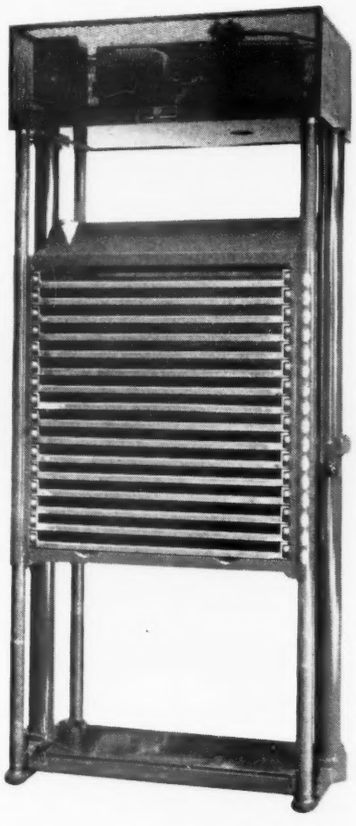
VACUUM FLAT CASTING BOX . . . Applies the vacuum principle to flat casting. Takes mats from small sizes up to full page eight columns. The box is closed and lock-up made in one easy operation.

STA-HI CORPORATION • 1020 CROCKER STREET • LOS ANGELES, 21

STA-HI

MASTEROUTER . . . A completely new curved plate routing machine, incorporating many radical changes in design and performing like a champion! . . . Users everywhere enthusiastically endorse it.





POWER LIFT FORM FILE . . . For rapid filing of full size newspaper page forms. Saves floor space, speeds up composing room routine in many ways. Hydraulically operated —simple to use, easy to maintain.

MAT PRE-DRYER . . . Built to give rapid, uniform mat pre-drying necessary for obtaining present day high shrinkage. Circulating hot air is accurately controlled by an electronic timer and a fine-range thermostat.

STA-HI CORPORATION • 1020 CROCKER STREET • LOS ANGELES, 21

SAM'L BINGHAM'S SON MFG. CO.

16 MODERN FACTORIES SERVING PRINTERS IN 31 STATES

WE ARE NOW MAKING
COMPOSITION ROLLERS

FOR

SUMMER USE

SHIP YOUR OLD ROLLERS
TO FACTORY MOST CONVENIENT TO YOU

OVER ONE HUNDRED YEARS OF ROLLER MAKING

FACTORIES

ATLANTA 3
CHICAGO 5
CLEVELAND 14
DALLAS 1
DES MOINES 2
DETROIT 10
HOUSTON 6
INDIANAPOLIS 7

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

FACTORIES

KALAMAZOO 12
KANSAS CITY 6
MINNEAPOLIS 15
NASHVILLE 3
OKLAHOMA CITY 6
PITTSBURGH 3
ST. LOUIS 2
SPRINGFIELD, O.

MAKERS OF RUBBER • NON-MELTABLE • FABRIC-COVERED • ROTOGRAVURE • OFFSET • COMPOSITION • VARNISH-LACQUER • GRAINING **ROLLERS**

PRINTING EQUIPMENT *Engineer*

A TECHNICAL MAGAZINE

JUNE
1949

Volume 78 Number 3

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

PRINTING EQUIPMENT Engineer, Published monthly at 1276 West Third St., Cleveland 13, Ohio, Copyright 1949 by Willsea Publishing Co.

Acceptance under section 34.64 P. L. and R., authorized February 10, 1949.

EDITORIAL STAFF

MacD. SINCLAIR, *Editor*

DR. R. R. VOORHEES
Field Editor

ADAM HENRI REISER
Associate Editor

Subscription price per year, $3.50 in advance in U.S.A. Single copy current issues, 35c; feature issues $1 per copy; December Equipment and Supplies Catalog Issue $2 per copy in United States, $2.50 outside of United States. (U. S. currency). Subscriptions in foreign countries $4.50 (U. S. currency) in advance. Canadian printing plant mechanical and production executives receiving Printing Equipment Engineer under CCA regulations will be charged $1 postage per year in advance to cover additional postage to Canada.

BUSINESS STAFF

DON WILL, *Publisher*

William L. Osborn, Eastern Manager, 1728 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 6-5980.

Eugene A. Powers, Midwest Manager, 612 N. Michigan Ave., Chicago 11, Ill. Phone: SUperior 7-2444.

Robert C. Craig, West Coast Representative, 601 S. Vermont St., Los Angeles 5, Calif. Phone: FAirfax 1363.

Member Circulation CCA Controlled Audit

Printed in U. S. A.

How to Prepare ART and COPY for Offset Lithography

by William J. Stevens
and John A. McKinven

Newest book on copy preparation with foreword by John J. Deviny, U.S. Public Printer. Over 125 illustrations. Reproduced in 2 and 3 color lithography. Four color process on Kromekote. Contains design, photography, retouching, type proofs, "paste-ups", etc. Page size 8½"x11". Cloth lithographed cover

$5.25
postpaid

PRINTING EQUIPMENT *Engineer*
1276 W. 3rd St. Cleveland 13, O.

LEADING ARTICLES FOR JUNE 1949

ANPA Program Features..... 55

ANPA Mechanical Committee. 56

ANPA Research Progress..... 58

Louisville's Beautiful New Building Houses Newspaper and Gravure Plants..... 59
M. GEORGE MARTIN

Printing 77 Colors in 3 Seconds. 67
PAUL WEST

Modern California Plant..... 68

Moving Day at St. Paul (Minn.) *Pioneer Press* and *Dispatch*..... 70
HORACE ANNIS

Equipment and Supplies..... 72

Paper Shredding Machine, 72
Bench or Floor Model Paper Driller, 72
Day-Glo Inks, 72
High-Intensity Stroboscope, 72
Paper Roll Handler, 72
Small Parts Cabinets, 73
Portable Automatic Sprinkler, 73
Lineal Tachometer, 73
Steel Rule Die Booklet, 73
Barrel Racker, 73
Elevator-Crane Bulletin, 73
Color Harmony Manual, 73
Testing Surface Temperatures, 74
Rotogravure Manual, 74
Gravure Cylinder Diameter Booklet, 74
Tally-Tab Machine, 74
Improved CAPCO Rewinder, 74
Rogers Price List, 75
Parabolic Glo Heater, 75
IPI Color Guide for Boxboard, 75
Carton Sealing Adhesive, 75
Magenta Masking Method, 75
Halftone Screen Counter, 75
12 in. Precision Level, 75
Artwork Storage Cabinet, 86
Handling Press Roller, 92
Plastic Binding Booklet, 104

Work Simplification Pays Profits..... 76
DR. R. R. VOORHEES

Potpourri Story..... 79

Absenteeism to Presenteeism.. 81
DR. W. SCHWEISHEIMER

Drying High Shrinkage Stereo Mats..... 83

Blueprint of Printing Equipment Industry's Position in Standby Program—II..... 84
PETER B. B. ANDREWS

Small Line-up Table..... 86

No Need For Alarm — Use Sensible Precautions..... 87

Conference Dates Box..... 90

Patents For The Graphic Arts. 94

Kink to Vary Screen Pattern in Letterpress Color Faking Jobs 99

Books Received..... 100

Silk Screen Printing Process, 100
114 Check Points on How to Prevent Grievances, 100
Formula For Supervision, 101

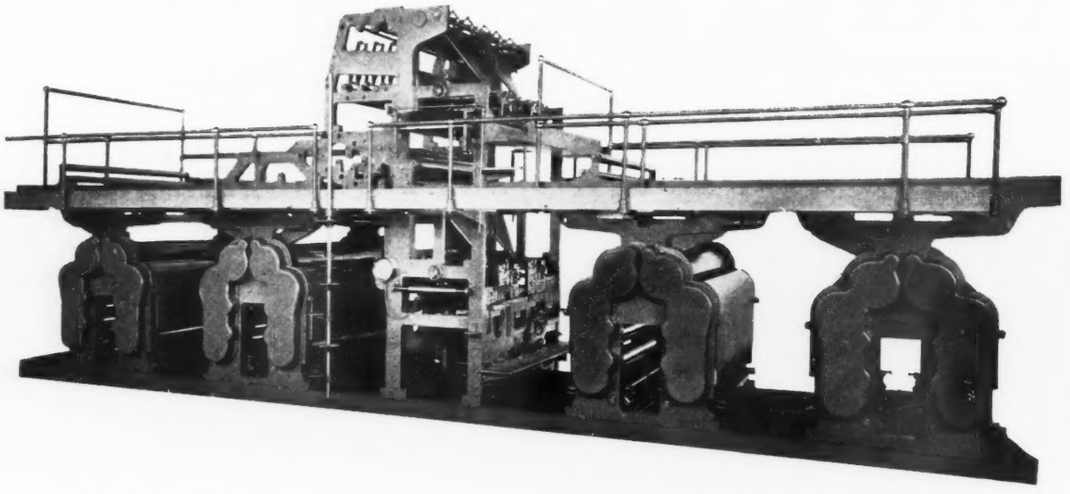
Chromometer Color Analyzing Machine..... 102

Infrared Drying..... 104

Really Modern Engineering in

SCOTT

NEWSPAPER PRESSES



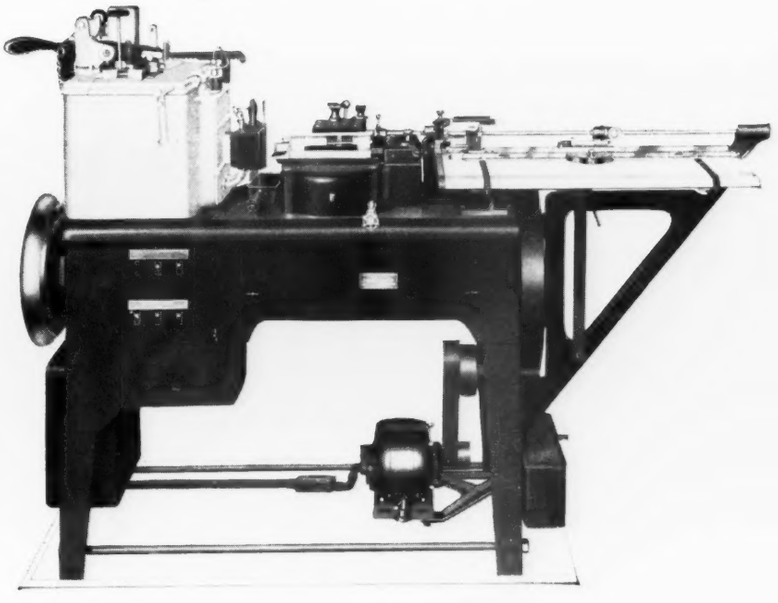
- The Scott is the ONLY newspaper press embodying important and modern engineering principles.
- Light weight, but extremely strong, hardened alloy steel spiral miter gears mounted truly concentric on splined high speed driving shafts carried in precision ball bearings, deliver a smooth and quiet flow of power to the press.
- Narrow faced, but also extremely strong, heat treated alloy steel helical spur gears mounted truly concentric and fastened by alloy steel bolts on the extra-large diameter printing cylinder shafts, assure noiseless, efficient rotation of the printing cylinders.
- The narrow faced gears permit oil enclosures projecting only 6″ from the side frames instead of the 14″ to 24″ projection that marks old style design and gearing.
- Hundreds of these Units in use have thoroughly proved the reliability, efficiency and freedom from wear or breakage of this "Really Modern" Scott construction.
- Why accept old style design when demonstrated superiority is available?

WALTER SCOTT & CO., INC.

PLAINFIELD, N. J.

The Elrod

will help to eliminate your strip material worries . . .



Plenty of strip material is one of the essentials of efficient newspaper production. When material racks are depleted the compositor has to resort to wasteful methods to get enough material to finish his work, which decreases his output and makes it difficult to meet your deadline.

With an Elrod on the job, such worries are eliminated, for the Elrod assures high-quality leads, slugs, rule and base material from 1-point to 36-points in thickness, sufficient for all composing room needs.

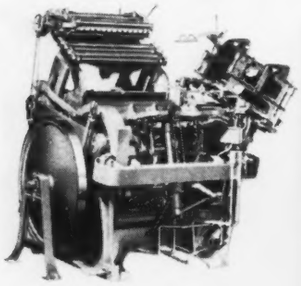
Simple in design and mechanism, the Elrod produces a constant supply of material as one continuous strip of metal, cooled and solidified under pressure. Elrod material meets today's exacting stereotyping requirements.

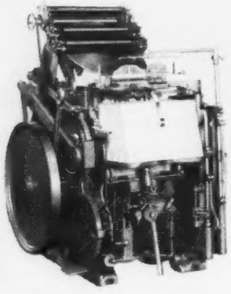
The Elrod is proved equipment through years of satisfactory service, and has earned its creditable standing in the modern newspaper plant. Ask us for further details.

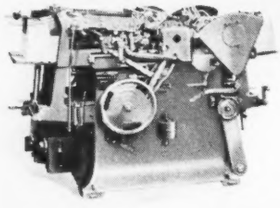
While attending the ANPA Mechanical Conference in Chicago on June 6, 7 and 8, plan on visiting our Home Office and Factory

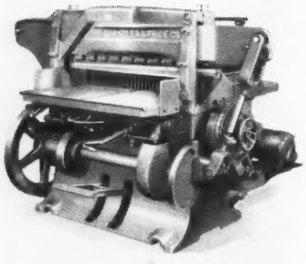
Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Illinois

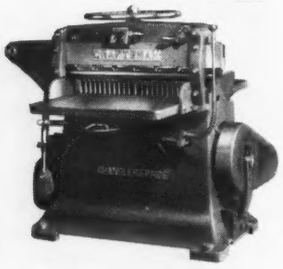
Protect Your Profits with Chandler & Price Equipment

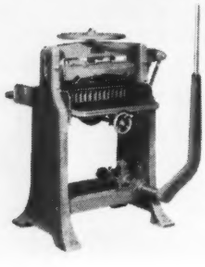


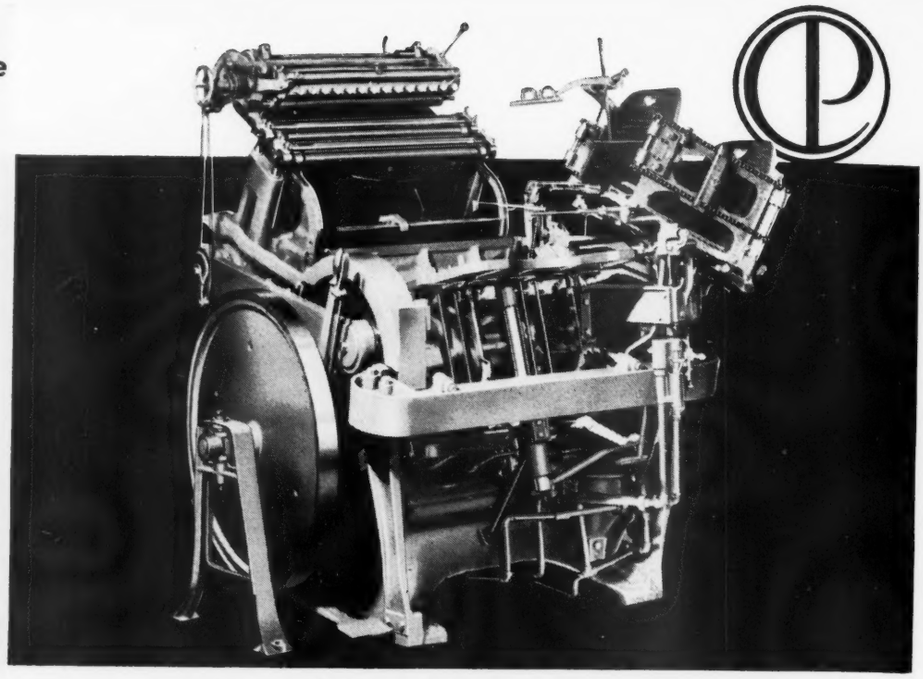












Step *Up Front* in Profitable (and specialized) operations with the

CHANDLER & PRICE SUPER HEAVY DUTY *"Front End"* AUTOMATIC PRESS

★ Truly automatic, including continuous feeding from hopper that permits loading while press is running (any stock from 13-lb. bond to heaviest cardboard, 3¼ x 5″ up to 15 13/16 x 23¼″) . . .

★ Sufficient impression strength for printing the heaviest forms, and for scoring, creasing, embossing and die-cutting . . . rectangular, round, irregular shapes, greeting cards, photomounts, cartons, book cases, and covers . . .

★ All operating controls (including ink fountain adjustments while press is running) reached from FRONT of press . . .

★ Printed sheet, form and platen in full view at all times—UP FRONT . . .

★ Delivery at FRONT, where pressman can easily check ink coverage or numbering machines (also makes slip-sheeting entirely practicable) . . .

★ Automatic throw-off of press if sheet fails to deliver . . .

THESE are a few of the features that make the Chandler & Price Super Heavy Duty 14½″ x 22″ Craftsman Automatic Press a superior producer—a press that makes regular printing and specialty printing highly profitable—a press that earns UP FRONT rank in today's finest printing plants.

Write for complete specifications.

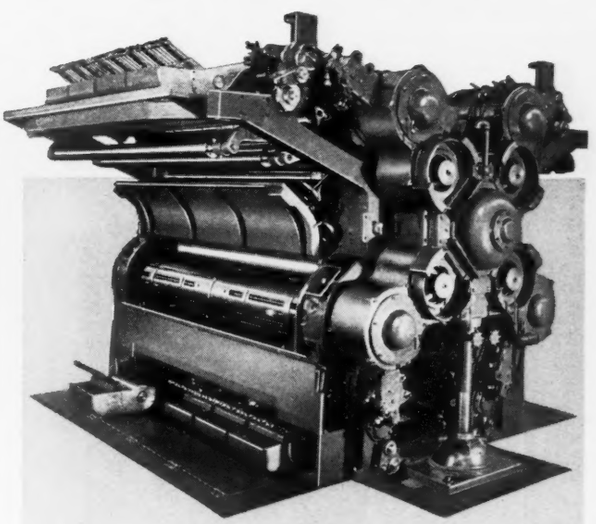
THE CHANDLER & PRICE COMPANY
CLEVELAND, OHIO

MANUFACTURERS OF PRINTING MACHINERY FOR OVER 60 YEARS

Color IN NEWSPAPER REGULAR EDITIONS

R.O.P. MULTI-COLOR in regular runs is now simple, economical, dependable!

★ ★ ★ ★ ★



The WOOD NEWSPAPER COLOR UNIT is high in flexibility — low in maintenance cost.

Each unit prints black *or* color as desired and, with little more preparation than for black alone, black and one or more colors may be run in uninterrupted succession.

THESE ARE EXCLUSIVE WOOD FEATURES

- Short leads that minimize possibility of web stretching and misregister.
- Color and black cylinders driven by single gear, thereby maintaining register by reducing backlash and torsion.
- Individual page-wide, easily accessible, color fountains, quickly removed and replaced for fast color change.
- Each printing couple reversible for increased flexibility of color position.

And . . . To reduce register time to A MATTER OF MINUTES . . .

The WOOD Color-Plate PRE-REGISTERING Machine registers Plates at a speed required in daily newspaper production — easily and economically.

This machine registers the plates before they reach the press. Teamed with the WOOD NEWSPAPER COLOR UNIT, it has helped to open up a new era in newspaper publishing—the age of color—any day—or every day. Write today for further information on either or both of these WOOD machines.

IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

How Long will it take to pay for new equipment...

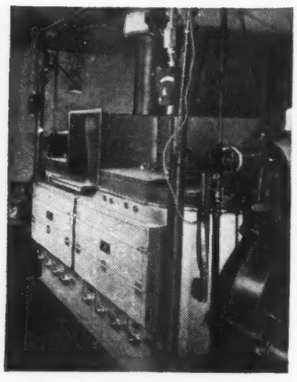
if you can save up to 40% in your metal heating?

When you figure that out... it often happens that you find Kemp Immersion Heating equipment will pay for itself in 2 years or less.

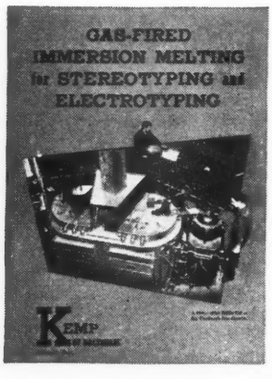
That's the record for many printers and publishers!

But first—to complete your data—you'll have to know what Kemp equipment costs. That's where the Kemp representative can help. There is one near you... a qualified engineer... and a word to us will bring him at your convenience.

Or perhaps you'd like to see our interesting illustrated booklet on Immersion Heating for Electrotype and Stereotype plants. Yours, too, for the asking.



12-Ton Stereotype Pot arranged to service two automatic casting machines. Installation shows method of piping and temperature controls.



The C. M. Kemp Manufacturing Co.
405 East Oliver Street
Baltimore 2, Maryland

☐ Please send me your NEW Bulletin No. IE-10 on Immersion Heating.

☐ Please send a Kemp representative in to see me.

Name.....

Company.....

Street.....

City..... Zone.....

State.....

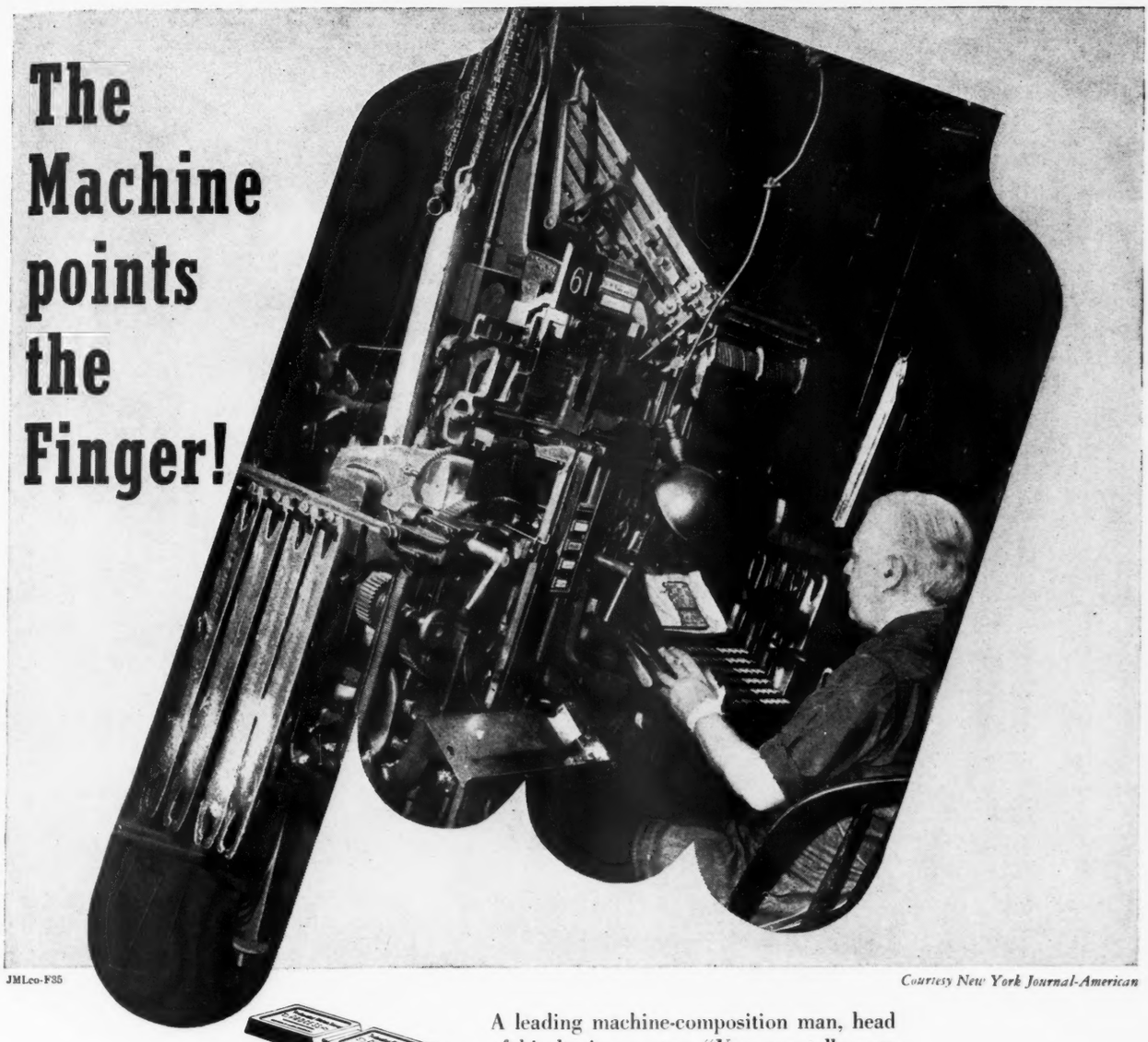
HPEE-6

KEMP of BALTIMORE

The C. M. KEMP Manufacturing Co.
405 East Oliver St., Baltimore 2, Md.

PRECISION CARBURETORS • BURNERS FOR INDUSTRIAL HEAT CONTROL • FIRE-CHECKS AND OTHER SAFETY DEVICES
ATMOSPHERE GENERATORS • INERT GAS PRODUCERS • ADSORPTIVE DRYER SYSTEMS FOR PROCESS CONTROL

The Machine points the Finger!



JMLeo-F35

Courtesy New York Journal-American

A leading machine-composition man, head of his business, says, "You can talk your head off about purity and balance of metals and eutectic points, and we can't prove you right or wrong."

"But the machines will test the metal promptly! If we find plungers wearing out in a month that we know should last a year or more . . . if orifices clog too quickly and demand cleaning every day . . . if our type face is dirty or frosty . . . then we know we've got poor metal. The machines have put the finger on the trouble."

Federated Process Type Metal has all the good characteristics that you can't see by looking. Chemical composition is proved by years of experience with every type of metal. Melting points are consistent with best melting practice. Purity is guaranteed by Federated's rigid control of manufacturing.

See Federated first for all metals used in the graphic arts, including monotype, stereotype, electrotype, linotype; electrotypers' foil; copper anodes; MOR-TIN correction alloys.

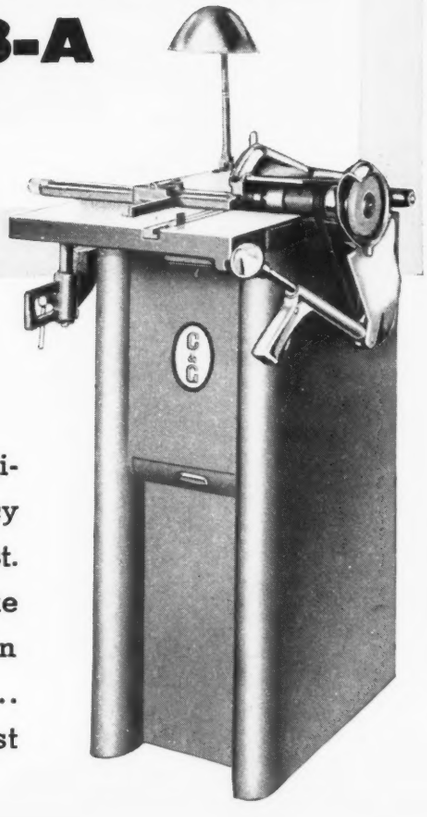
Federated first in the non-ferrous field AMD

Federated METALS

Division of American Smelting and Refining Company, 120 Broadway, New York 5, N. Y.

Don't Let Deadlines CROWD YOU!

Save Vital Minutes
WITH
C&G SAW TRIMMERS
MODELS 3-A
and **45**



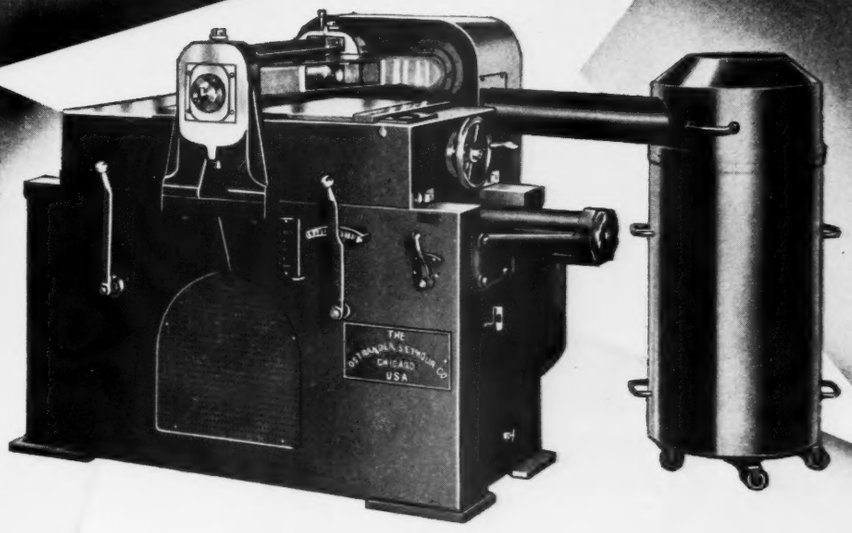
Day by day C&G Saw Trimmers set new high-efficiency standards with faster work, greater accuracy and improved safety — all at lower maintenance cost. Your experience with other saw trimmers may make this hard to believe, but there's plenty of proof in your copy of the new C&G 3A-45 folder. It's free... and waiting to go out the moment your request comes in. No obligation.

THE *Morrison* COMPANY
125 W. MELVINA STREET • MILWAUKEE 12, WIS.

HYDRAULIC DRIVE

HEAVIER CONSTRUCTION

ADJUSTABLE CUTTER HEAD



WOULD YOU ACCEPT *Extra Profit?*

SUPPLIERS TO ELECTROTYPERS AND STEREOTYPERS SINCE 1876

Never before has efficient equipment been so essential to profitable operation. Yet in many plants little attention has been given to the machinery of production, in relation to profit or loss.

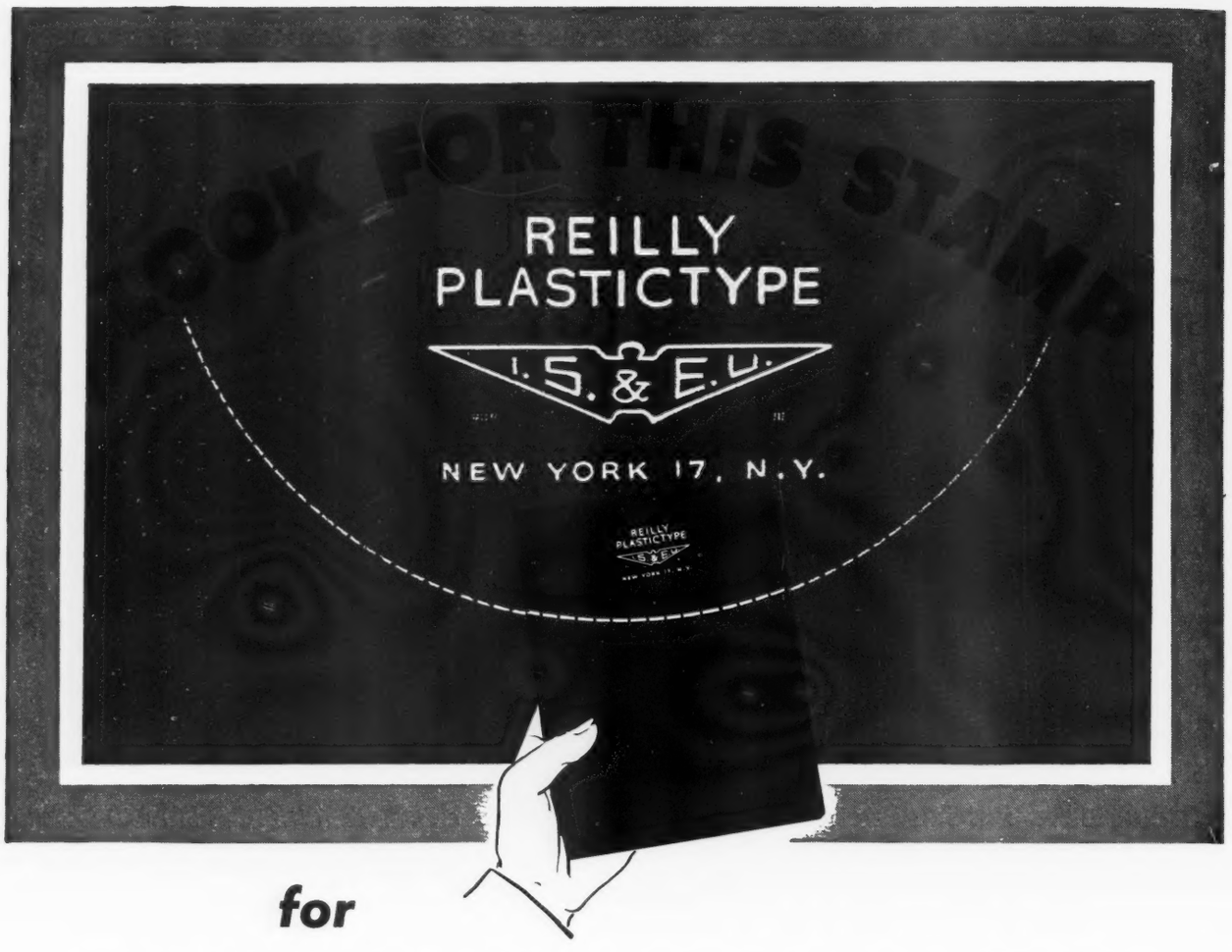
Modern, up-to-date equipment increases production and reduces costs. It changes loss to profit and small profit to a more generous one.

The Ostrander-Seymour Rotary Head Plate Shaving Machine (Junior Model) is designed for present day requirements. It is as efficient as the experience of 65 years in producing equipment for electrotypers and stereotypers can make it.

If your margin is little, if delivery requests seem unreasonable, if you need better quality plates faster, write or call. Recommendations do not obligate you.

THE OSTRANDER SEYMOUR CO.

4703 W. ARTHINGTON ST. • CHICAGO 44, ILL.



for

QUALITY PLASTIC PLATES

• Look for this Reilly PLASTICTYPE stamp on the back of the plastic plates you receive from national advertising accounts. It's your guarantee of receiving a precision-perfect plate which is the achievement of *six full years* of producing fine plastic plates. The standards of precision which every Reilly PLASTICTYPE must meet are unmatched in the industry. When you see this Reilly PLASTICTYPE stamp you can bet there'll be no production bugs on that ad.

Actually, you newspaper men helped to develop Reilly PLASTICTYPE standards. Aided by your suggestions, Reilly engineers have standardized the manufacturing procedure for Reilly PLASTICTYPES to give you these fine reproduction features. Every Reilly PLASTICTYPE is the same uniform thickness, obtainable only with homogeneous Vinylite plastic. Every Reilly PLASTICTYPE is closely routed to clean up all shoulders of illustrations and reproduced type. Open areas are routed to .055 of an inch in depth so that, even in the third dimensional shrinkage of stereotyping, there's no open area printing.

It's not surprising that over 250 national advertisers are regular Reilly PLASTICTYPE users . . . for tearsheets have convinced them that this precision-perfect plastic plate gives cleaner, sharper reproduction. So you'll be seeing plenty of these Reilly PLASTICTYPE stamps . . . a stamp signifying the achievements of 40 years of "Reilly Research."

See the Reilly PLASTICTYPE display in Booths 69-70,

Reilly *Plastictypes*

REILLY ELECTROTYPE COMPANY

305 East 45th St., New York 17, N. Y. MUrray Hill 6-6350

CHICAGO • DETROIT • INDIANAPOLIS • SAN FRANCISCO • LOS ANGELES

EXPERIENCE

These well known trade marks are symbols of knowledge.

On the one hand . . . broad, practical, specific knowledge in the art of manufacturing printers' and lithographers' rollers as well as in the mechanics of their distribution and proper servicing. On the other . . . knowledge, skill and scientific means to compound rubber for certain requirements. Each knowledge is the result of long specialized experience.

For printers and lithographers in seventeen eastern states, the name "ROYAL" on their rollers means a combination of effort on the part of both these great companies to produce, distribute and service a better roller!

MACHINE-CAST PRINTERS' ROLLERS · SINCE 1826 ·

BINGHAM BROTHERS CO.
OLDEST NAME IN ROLLERS

UNITED STATES RUBBER COMPANY · US · TRADE MARK

U. S. RUBBER CO.
OLDEST NAME IN RUBBER

"ROYAL"

Good Rollers Create Good Impressions

BINGHAM BROTHERS COMPANY

New York	Philadelphia	Baltimore	Rochester	Newark
406 Pearl Street	1315 Race Street	131 Colvin Street	980 Hudson Avenue	Lister Avenue

Springfield	Garwood, N. J.	New Haven
182 Massasoit Street	648 South Avenue	49 May Street
(Sales Branch)		(Sales Branch)

In its Full Range of Combinations, this MACHINE GATHERS, STITCHES, COVERS, and DELIVERS!

Handling about every kind of printed matter from single sheets and calendars, booklets and pamphlets . . . to complete magazines and signatures from 5x7" minimum to 12x16" maximum, at speeds as high as 150 books per minute, the Martin Rotary Gatherer accomplishes the almost unbelievable.

The rotary principle gatherer operates smoothly at a pace unmatched by any other machine for its purpose. In flexibility too, the Martin is unapproached. Unit construction in multiples of four hoppers permits its adaptation to signatures in any number, enlargement being made in units of four as number of signatures increases.

As a time and labor saver, a production booster and a handler of volume with almost incredible speed and efficiency, the Martin Rotary Gatherer in its various combinations is an economical investment for those requiring in large volume the work it performs.

OFFERED IN FOUR COMBINATIONS

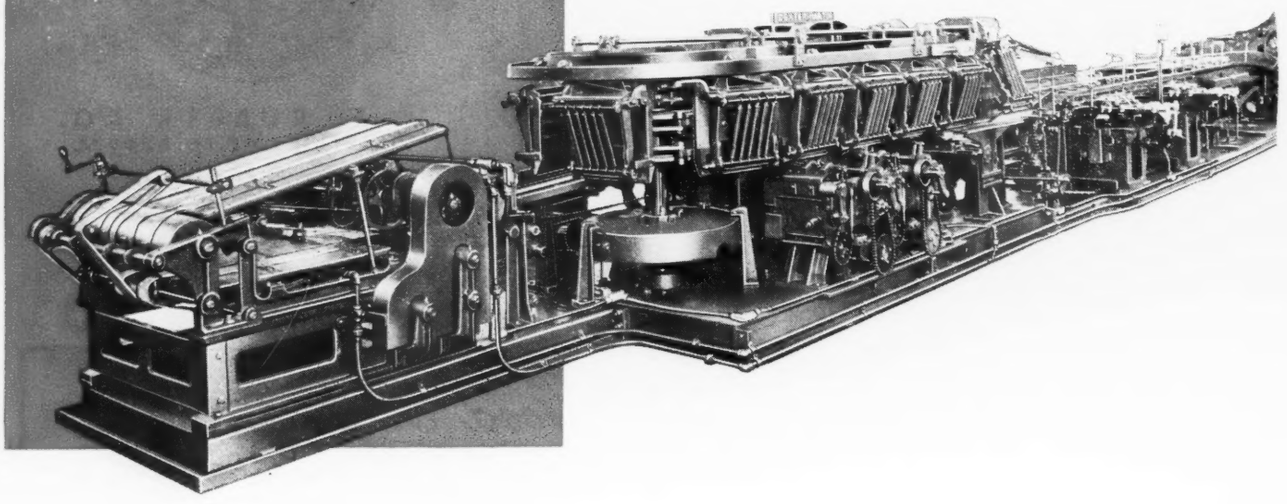
THE MARTIN ROTARY GATHERER AND DELIVERY
For collating book signatures, single sheets and calendars.

THE MARTIN ROTARY GATHERER, STITCHER AND DELIVERY
For side-stitched booklets.

THE MARTIN ROTARY GATHERER, STITCHER AND COVERER
For magazines and other side-stitched publications.

THE MARTIN ROTARY GATHERER AND PERFECT BINDER
For pocket books, magazines and thick catalogs.

We'd like to tell you more about how you may be served to advantage by the Martin Rotary Gatherer — and other Dexter & Christensen Machines for busy binderies.



Dexter and Christensen Machines

Sold and serviced by

Dexter Folder Company • General Sales Offices, 330 West 42nd Street, New York 18, N. Y.

SALES REPRESENTATIVES: Chicago, Philadelphia, Boston, Cleveland, Washington, St. Louis

AGENTS: Dallas, Denver, San Francisco, Los Angeles, Seattle, Toronto, Montreal, Winnipeg . . . and in Foreign Countries

Christensen Machines are built by Christensen Machine Company at Racine, Wis.

Handle Your Newsprint *on* ELWELL-PARKERS

E-P Low Lift Truck carries signatures in skid loads.

Boxcars can often be emptied in less than an hour with an E-P Roll Handler.

ELWELL-PARKER ELECTRIC POWER TRUCKS WILL—

1. Pick up the biggest rolls your presses can handle.
2. Carry them swiftly from boxcar or truck to storage and then to the presses.
3. Protect newsprint from damage due to bumping the roll.
4. Utilize ALL storage space. (Choose rotating apron for horizontal or vertical pick-up or storage, or forks with pallets for vertical storage, or bare forks for horizontal.)
5. Enable the whole job to be done SAFELY by one-man crews.

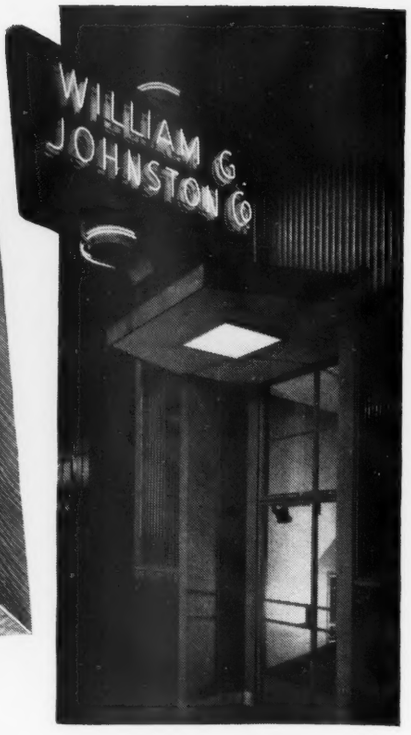
Remember the efficient flow of blank paper *into* and *through* your plant is essential if newspapers are to pour *out* of your plant with speed and economy...Have an EP man recommend a modern newsprint handling system for you. The Elwell-Parker Electric Co., 4517 St. Clair Ave., Cleveland 14, Ohio.

48 PAGE BOOK shows how to cut paper handling costs. Ask for "Industrial Logistics in Paper".

ELWELL-PARKER

Established 1893

POWER INDUSTRIAL TRUCKS



Four Gas-equipped Miehle Vertical Presses and, below, one of three Miller two-color presses, all GAS-equipped

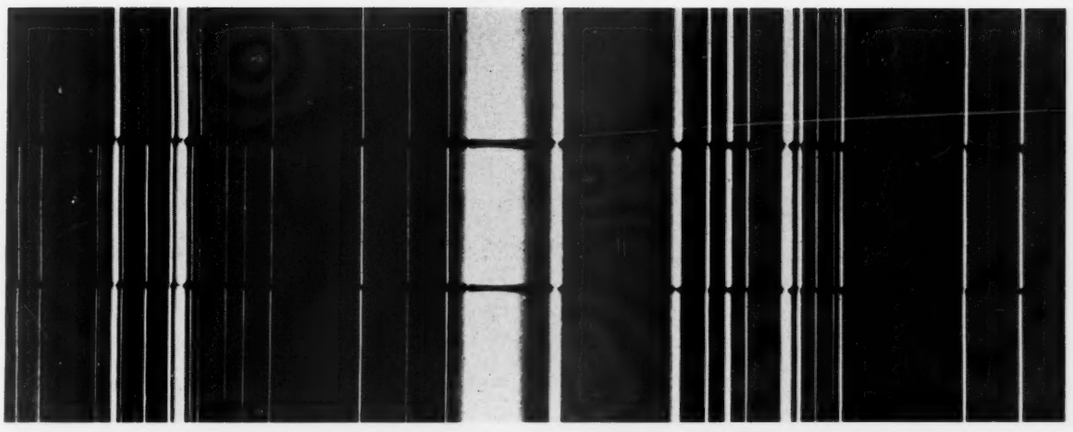
PRODUCTION TECHNIQUES have been applied to every graphic arts operation at the 130-year old William G. Johnston Company, Pittsburgh, Pennsylvania. Modern high-speed presses and type-casting machines supply the volume printing requirements of many business and industrial organizations.

Since many of the processes require heat, the William G. Johnston Company has standardized on flexible GAS for presses, type-casting machines, metal-melting furnaces, glue pots. These diversified applications represent a few of the ways in which the productive flames of GAS serve the graphic arts, but Plant Manager, H. M. Fritz sums up the experience of his company in these words, **"GAS is important to us because of its speed, flexibility, economy, and cleanliness. We have used Gas-equipped machinery for many years with complete satisfaction."**

The long list of GAS users, and the many ways in which they apply GAS to graphic arts processes, is evidence of the wide acceptance of this versatile production-tool. You'll find it worthwhile to check up on GAS for any heat processing requirement.

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.



PREVIEW OF **BLATCHFORD** PERFORMANCE

THE PHOTOGRAPH reproduced here bears some resemblance to a set of military campaign ribbons —evidence of service rendered. Actually, the illustration is a spectrogram which, to the metal analyst, provides evidence of service *to be* rendered—by type metal.

To make sure that Blatchford Metal everlastingly lives up to the pledge of performance implied by its brand, the metal is regularly scrutinized by our laboratory technicians —for purity and percentage of ingredients, grain structure, hardness, toughness, molten fluidity and other properties. The eyes of science, so to speak, seek to make sure that every ounce of Blatchford Metal will give the sort of service the buyer has a right to expect for his metal money.

There is a Blatchford Metal for every type of machine composition and for stereotypes and electrotype backing. Each is the correct lead-tin-antimony alloy for its purpose. Each is supplied in pigs or ingots for hand or automatic feeding.

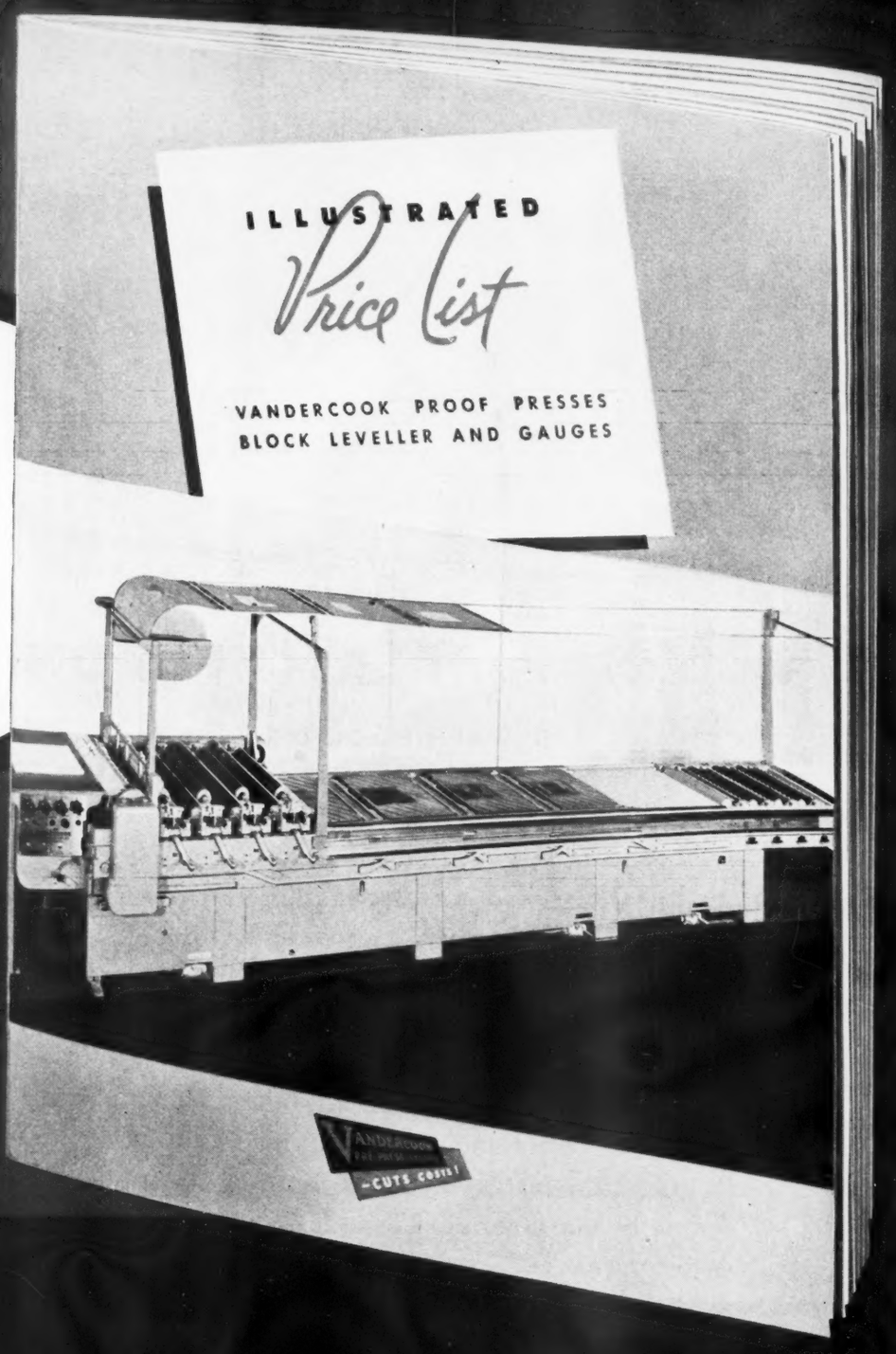
When you're in the market for type metal, better buy Blatchford... for Blatchford's the better buy.

Blatchford METAL

NATIONAL LEAD COMPANY
BALTIMORE • BUFFALO • CHICAGO • CINCINNATI
CLEVELAND • PITTSBURGH • ST. LOUIS

NATIONAL LEAD CO. OF MASS., BOSTON
AMERICAN LEAD CORP., INDIANAPOLIS
E. W. BLATCHFORD CO., NEW YORK
ATLANTA: GEORGIA LEAD WORKS (Div. of Cincinnati Branch)
MORRIS P. KIRK & SON, INC.
Los Angeles • Portland • Oakland • Salt Lake City

JUST OFF THE PRESS!



VANDERCOOK
PRE-PRESS SYSTEM
-CUTS COSTS!

when the subject of BETTER INK comes up...

Who will have the information? No A. N. P. A. Mechanical Conference is complete without a discussion of this important factor in newspaper publishing.

You'll find a man at the Conference who's got the story on ink — the kind of ink that will give your paper a clear, clean-cut, attractive appearance. He's the Herrick representative.

He's the man who can tell you how and where to get an individualized news ink, compounded to suit just *your* pressroom conditions. Obviously, such an ink should be better. Awards won by Herrick users is testimony that it *is* better.

So when the subject of *better ink* comes up — the *Herrick Ink man* will have the information you want. Look him up at the Conference.

to suit your pressroom conditions

HERRICK *Inks*

William C. Herrick Ink Co., Inc.

Main Office & Plant

EAST RUTHERFORD • NEW JERSEY

4082

Before you turn this page, put your glass on this illustration. It's engraved on Imperial Zinc, the zinc with finer grain, more uniformly controlled, because it comes from the most modernly-equipped plant in the industry.

If you are one of the thousands of newspaper mechanical men now specifying "Imperial" we'd like to meet you, personally. Maybe you can give us some ideas as to how we can serve you even better.

Drop in on us at our exhibit while you are attending the ANPA Mechanical Conference at the Palmer House, Chicago, June 6, 7 and 8.
(If you are unable to get to the Conference, remember that we are always glad to call on you, in your own office, at your own convenience.)

If you haven't yet gotten around to specifying "Imperial", perhaps the fault is ours. Probably we haven't yet made clear to you *all* of the advantages that Imperial users enjoy. We would welcome an opportunity to give you the *complete* story.

Imperial

TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

4 FULL YEARS *of dependable* Roller performance

That's the average life of IDEAL MASTERLITH Rollers according to records kept by users. Over a period of many years, MASTERLITH users have kept accurate histories of the length of service received from these rollers—that average is four years!

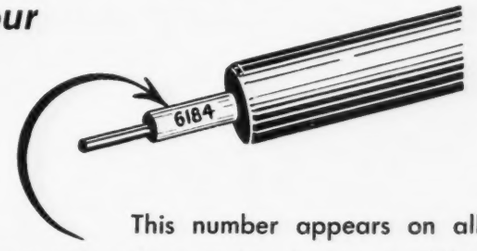
This means top performance for the *full* average life for there is no "breaking in" period and none of gradual decline in efficiency.

There is no other roller like the MASTERLITH vulcanized oil roller and if we produced a new roller tomorrow, it would still be four years before we could be certain that it equaled MASTERLITH.

For the finest lithographic color work, start using MASTERLITH rollers today with full confidence that they will control water and ink colors perfectly all the way through your press.

Look for the factory number on your core

★



This number appears on all spindles large enough to bear it. Keeping track of this number the day the new rollers are received in your plant, and of the date they next have to be renewed, will convince you of the length of service you get from MASTERLITH vulcanized oil rollers!

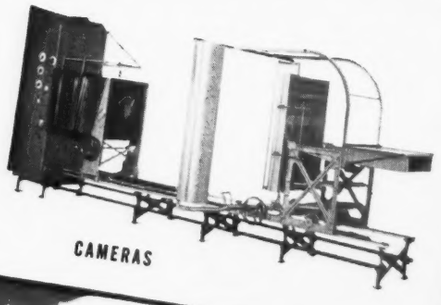
IDEAL ROLLER & MANUFACTURING CO.

Chicago 8, Illinois • Long Island City 1, N. Y.

All the Way Through

with the CHEMCO PHOTOENGRAVING LINE

Loaded with three different widths of film . . . A simple turn of the crank places the desired width and length of film in position for exposure . . . Exposed film is dropped into light tight box, making it possible to shoot a series of negatives . . . No wasted steps to the darkroom between exposures . . . Controls are simple, easy-to-set . . . Speed production in your camera department.



CAMERAS

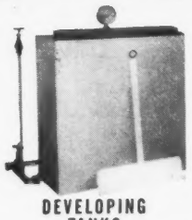
STRIPPING TABLE

Chemco Stripping Tables provide an evenly lighted, non-glare surface that is easily adjusted to the most convenient working angle . . . Squaring-up device and adjustable-head stainless steel T square are standard equipment . . . Two drains provide ample capacity for carrying off excess water.

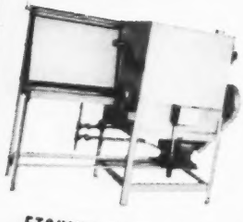
Chemco Cold Grid Printers speed production . . . Make for high fidelity in the plate image . . . Cut production costs . . . Are plugged into an ordinary 110-volt circuit without overloading.

Chemco leakproof developing tanks take plates up to 25" x 32" . . . Prevent rapid evaporation of the developing solution. . . . Stainless steel construction gives long service life.

COLD GRID PRINTERS



DEVELOPING TANKS



ETCHING MACHINES

BURNING-IN OVENS

Chemco burning-in ovens assure even burn-in . . . Are easy and economical to operate . . . Two types—gas heat or infra-red elements . . . Chemco stainless steel coolers, hooked in tandem with either type, are available for use with running water or for foot pump operation. Continuous power exhaust gives Chemco etching machines fume free operation in the etching room . . . Chemco takes either's plate sizes up to 25" x 32" . . . Chemco all stainless steel construction means long, trouble-free life.

Chemco carries a full line of chemicals, supplies and equipment.

CONTACT CHEMCO FOR EXPERIENCED HELP WITH YOUR PHOTOENGRAVING PROBLEMS

CHEMCO PHOTOPRODUCTS COMPANY, INC.

Factory and General Offices—Glen Cove, New York

BRANCHES: NEW YORK • CHICAGO • DETROIT
NEW ORLEANS • BOSTON • ATLANTA • DALLAS

Effective two-color newspaper ad produced for Gulistan Carpets

Charm
YOURS WITH
GULISTAN
RENAISSANCE
The secret of Renaissance lies in the deep, thick pile flowing wall-to-wall in one luscious color, the glow of warm lights blending to subtle shadows in the enchanting sculptured weave. And the new Renaissance design is lovelier, more versatile than ever. Your guests will see in its subtle beauty a reflection of your charm.
YOUR BEST SALESMAN...

PRINTING INK

IN NEWSPAPERS, TOO, *COLOR SELLS.* Color advertising in newspapers has progressed rapidly since the war. Sunday supplements are expanding. And nearly 500 newspapers in 42 states now carry run-of-paper color advertising — an increase of 25% over 1947.

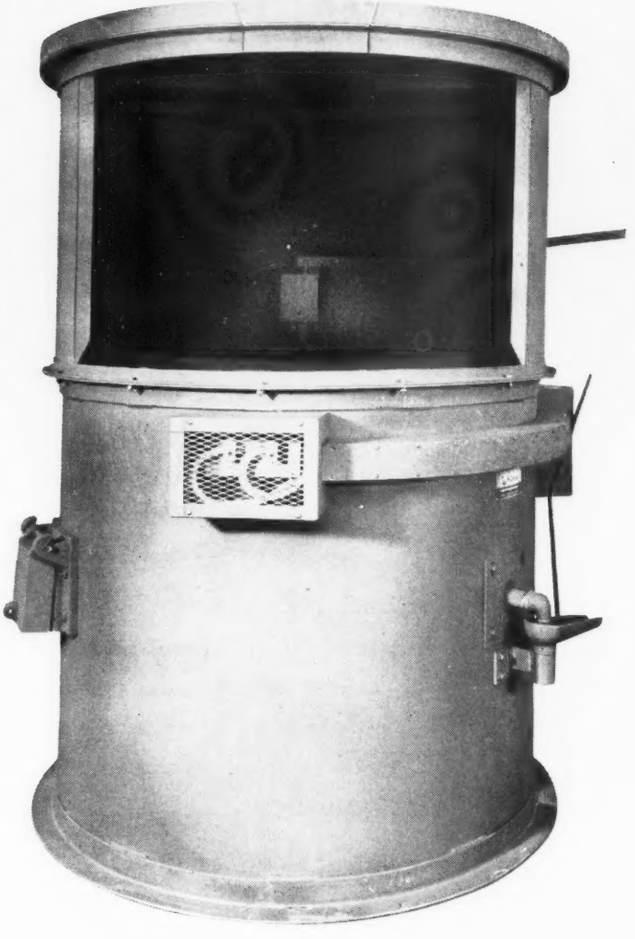
Let color help make *your* advertising more effective. Remember that only in the medium of printing ink, on the printed page, can your product be reproduced in lifelike color — the way your customers recognize and *remember* it.

In newspapers, in magazines, on displays and packages, printing ink is your best salesman.

NATIONAL ASSOCIATION OF PRINTING INK MAKERS
1440 BROADWAY · NEW YORK CITY

TYPEMETAL REMELTER

by LINDBERG-Fisher



...WITH NO OBSTRUCTIONS IN THE MELTING CHAMBER!

The Lindberg-Fisher typemetal remelter for gas, oil or electric installation—quantities from 1,000 lbs. to 10,000 lbs. No heating elements, muffles or obstructions in the heavy iron melting chamber. Hemispherically shaped pot allows easy cleaning and fluxing. Six inch insulating lining prevents heat loss. Self-closing pouring valve is located inside for greater safety. Temperature of the Monarch, whether gas, oil or electrically heated, is electronically controlled by meter-type pyrometers. Efficient ventilating hood for every Monarch meets all fume removal requirements.

FOR ELECTRIC HEATING . . . Nickel-chromium heating elements are located between furnace wall and melting chamber. Electronically controlled—completely wired for easy installation.

FOR GAS AND OIL HEATING . . . For fast heating and efficient combustion, the Monarch is equipped with a centrifugal blower, and the finest quality burners (nozzle mix burners for gas and 2-stage burners for oil). Safety pilot lights—ignited with a match—are provided for each main burner.

Available for immediate shipment. Write for Bulletin 101-A for full details.

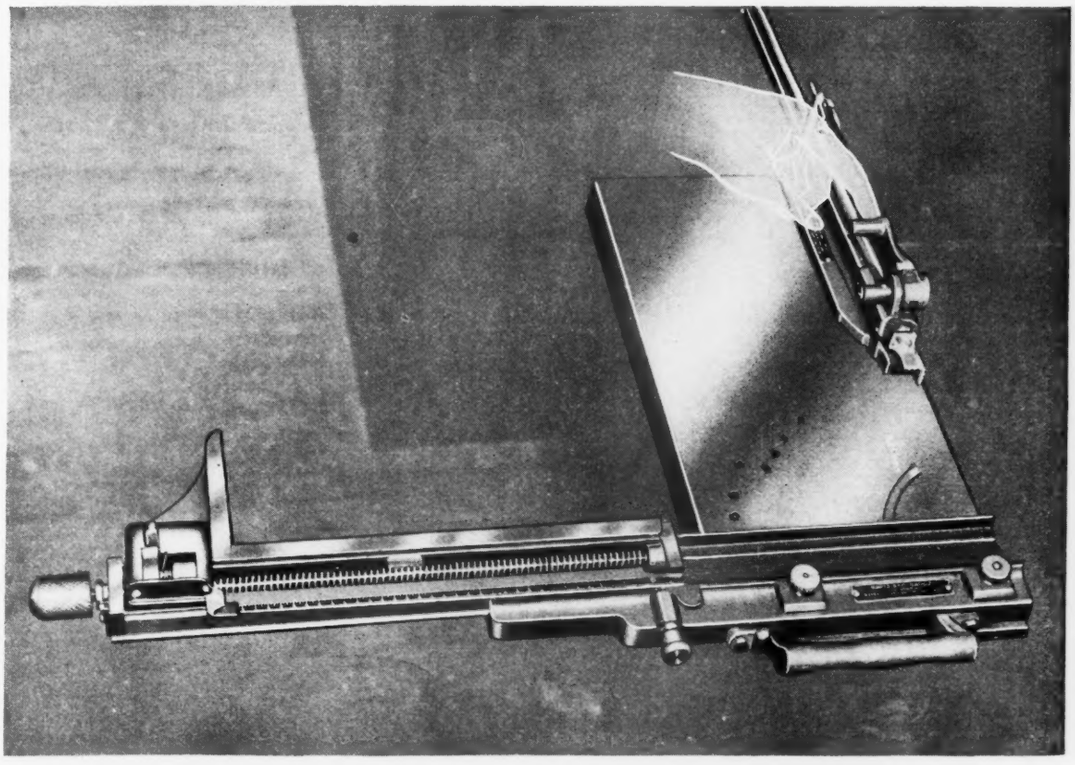
LINDBERG Fisher Furnaces

LINDBERG ENGINEERING COMPANY, 2468 WEST HUBBARD ST., CHICAGO 12, ILLINOIS

PRECISION TOOLS

for the modern composing room

The Work Holder and the Extension Gauge illustrated below can be attached in a few minutes to your Miller Saw. They are precision made — so accurate that all parts are easily interchanged and replaced. No machining or adjusting necessary.



A touch of your finger locks the work securely, safe from contact with saw-blade.

Extended instantly to 132 ems.

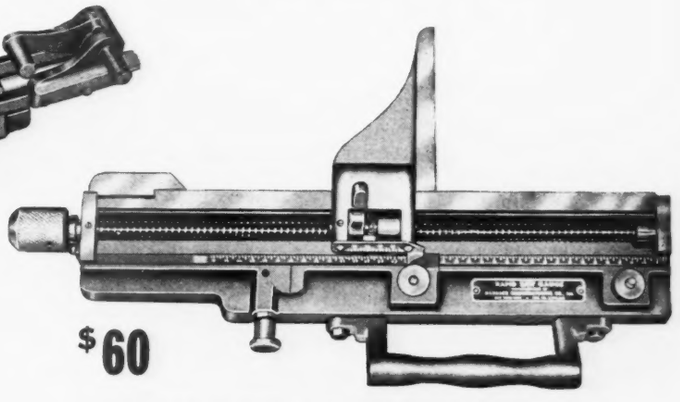
Plug quickly allows extension of Gauge.

The Sure Grip Work Holder and the Rapid Saw Extension Gauge are shown above installed on a Miller table. These two precision tools will save you the expense of a new saw — for they convert your old saw into a modern tool that is more useful and accurate than you believed possible. All working parts are guaranteed accurately made, as is and has been the Margach policy.

$40

THE SURE GRIP WORK HOLDER

grips slugs, rules and plates instantly in an immovable vise grip with a mere flip of the finger.



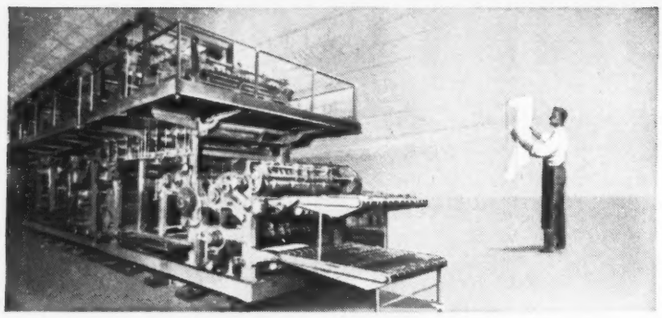
$60

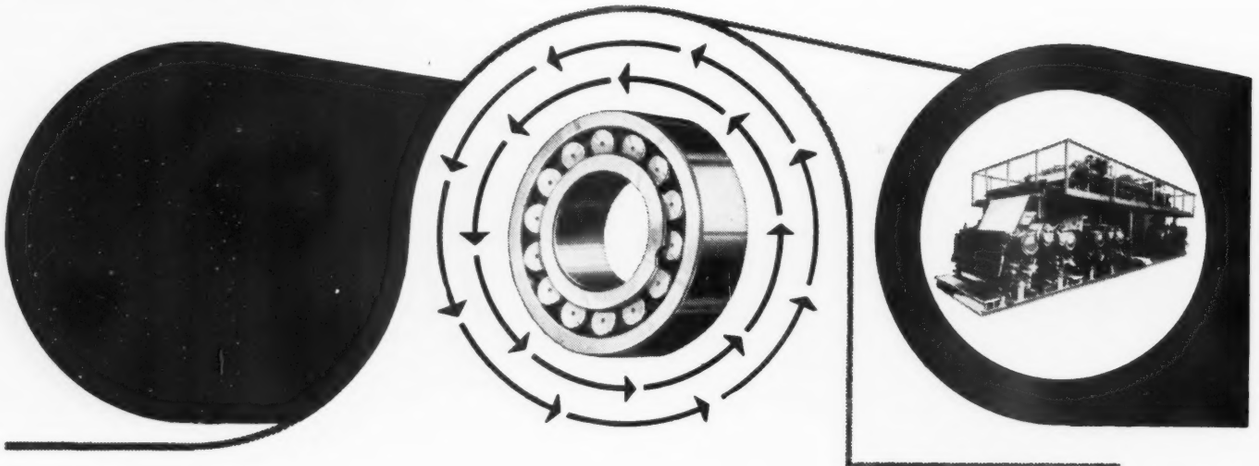
THE RAPID SAW EXTENSION GAUGE

retracted in normal position. Knurled knob allows minute adjustments to any point size from 1 to 132 ems.

MARGACH MANUFACTURING CO., INC.

47 WOOSTER STREET, NEW YORK 13, N. Y.





the printing press that runs faster faster faster faster prints more efficiently on SKF bearings

From the giant, highspeed, precision multi-color presses to small hand-proof presses, SKF Bearings play a vital role. 24-hours a day these quality bearings withstand the severe operation of continuous service . . . with a minimum of attention and maintenance.

Here's where and why SKF Bearings and Pillow Blocks are used:

Printing Press Cylinders: *To eliminate bearing yield under heavy radial and thrust loads, SKF Bearings are preferred. SKF Bearings take misalignment during cylinder adjustment . . . run smoothly at high speeds.*

Spherical roller bearings in SKF Pillow Blocks are used on many large presses to support the main drive shaft, and to give trouble free service on dryers and other heavy duty locations.

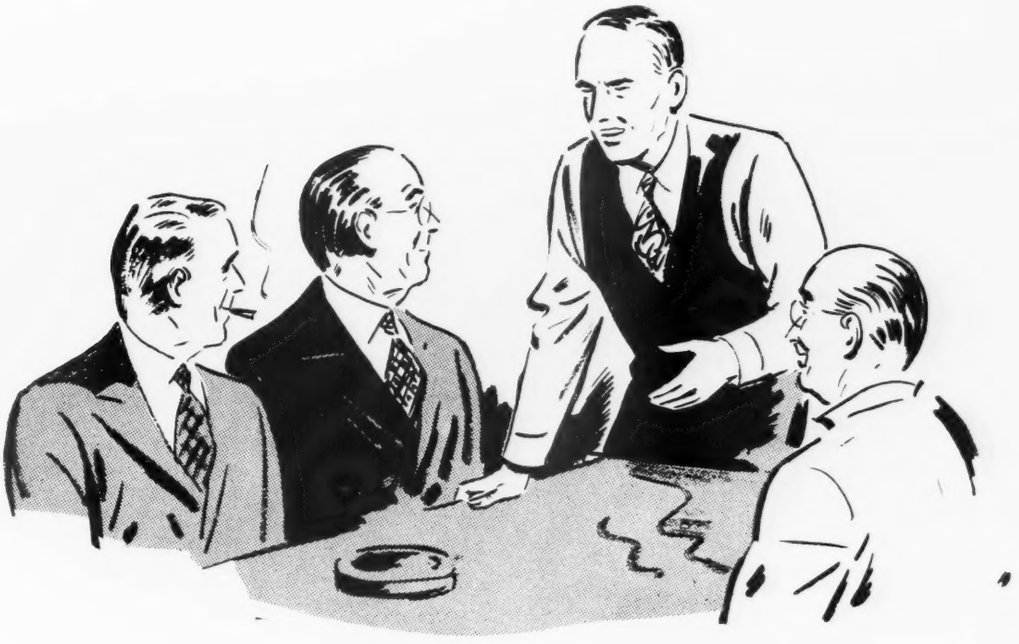
Matrix Rollers, Plate Conveyors, Paper Handling Equipment: SKF *"Sphericals" do the hard jobs with ease. They require minimum lubrication, no adjustment . . . and withstand shock loads and misalignment.*

Wherever a cylinder or shaft turns on Printing Equipment, there's an SKF Bearing to meet the requirement. Check with our engineers. SKF Industries, Inc., Philadelphia 32, Pa. 6643

Printing Equipment Bearings engineered by SKF

★

"No Cooperative Buying FOR ME"



the Production Manager tells his Purchasing Department: "While there may be an apparent initial saving through a so-called buying group, our experience has shown that Certifieds actually save us money in the end . . . Our Stereotype Department is doing an outstanding job and our production costs are lower by using only the best. In mats, it's Certified."

. . . . CERTIFIED DRY MAT CORPORATION . . . .

9 Rockefeller Plaza Dept. M New York 20, N. Y.

For Dependable Stereotyping, Rely on Certified Mats

Certified DRY MATS

The Complete Remelting Installation

DUMPERIN

Big Chief Remelter -- Twintype water-cooled Mold

CUTS MINUTES TO SECONDS

Here you have a time-saving, fuel-saving, money-saving, labor-saving remelt installation far, far in advance of any other equipment for remelting type-metal.

Briefly, as space permits, the truck, riding on roller bearings, loaded with as much as 500 lbs. of slugs or type, is rolled to the Big Chief Remelter; you press a button, the truck moves upward, opens the furnace door, turns over, dumps the load; you press the button again, the door closes, the truck glides down—Time round trip—30 seconds!

The Big Chief loaded, currents of heat, its temperature automatically controlled, attack the metal simultaneously and speedily on all sides until completely molten . . . . . **NOW**

Flip the switch and an Electric agitator mixes the metal to a homogeneous alloy. . . . . **NEXT—**

Swing the valve-handle and molten metal flows through a dross-catcher, down the trough into 8 cavities of the Twintype water-cooled mold and quickly freezes to solid—Turn the mold over and 8 clean, Double-ear Slip-off ingots (176 lbs.) slide into cradles as a cool set of cavities await the next pour—

Time—2 minutes!

Equipment can be seen at the following plants:

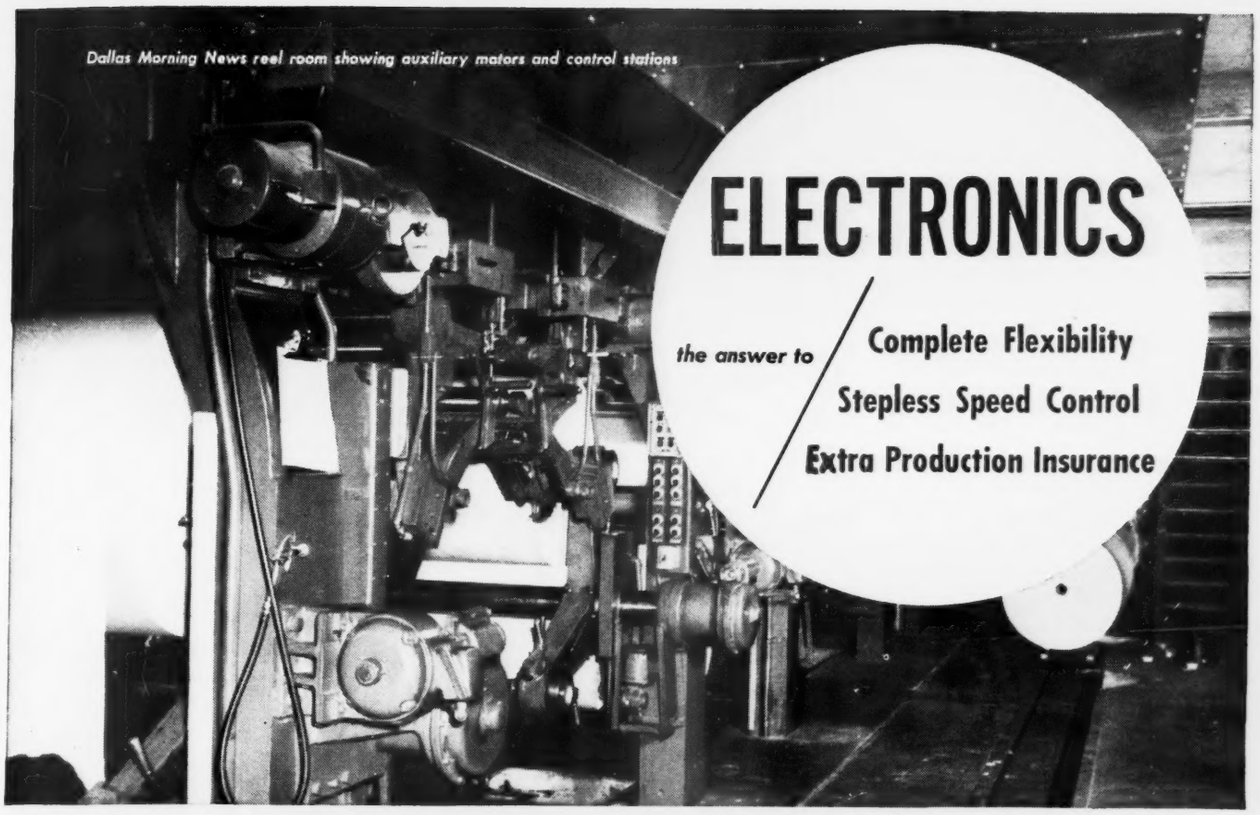
Herald-American, Chicago
Tribune, Chicago
American Typesetting Corp'n, Chicago
Journal, Milwaukee
Sentinel, Milwaukee

UNITED AMERICAN METALS CORP'N

AND AFFILIATED CORPORATIONS

SYRACUSE SMELTING WORKS, EXPORT DIVISION

200 Diamond Street, Brooklyn 22, N. Y. 2246 W. Hubbard St., Chicago 12, Ill. 1800 Cherry Hill Road, Baltimore 30, Md.
785 Bryant St., San Francisco 7, Cal. 2448 E. 25th St., Los Angeles 11, Cal. Kilgore Highway, Tyler, Texas



Dallas Morning News reel room showing auxiliary motors and control stations

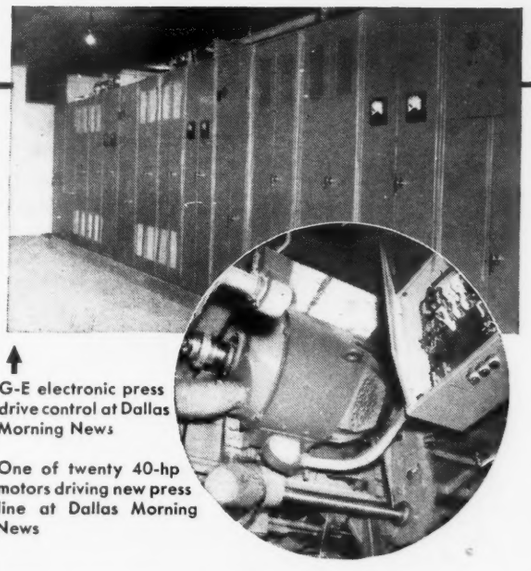
ELECTRONICS

the answer to

Complete Flexibility

Stepless Speed Control

Extra Production Insurance



G-E electronic press drive control at Dallas Morning News

One of twenty 40-hp motors driving new press line at Dallas Morning News

Here's what another well-known newspaper production man—Leven Deputy, Mechanical Superintendent, The Dallas Morning News—says about the General Electric electronic press drive, installed for the first time in the Southwest by the Dallas Morning News:

"We believe in the idea of complete flexibility of press combinations, stepless speed control, and inherent standby capacity for extra production insurance. Because we believe electronic press drive can answer these expectations, when we planned our new printing plant, we ordered General Electric electronic press drive equipment."

The magic of electronics, successful in hundreds of other applications, has now proved itself a worthy partner in the printing industry. Through the ignitron rectifier tube, incoming a-c power is converted to d-c power for accurate and complete press control. Power costs are slashed. The entire installation is compact; easy to operate, easy to maintain. Get the details now!

YOU CAN PUT YOUR CONFIDENCE IN GENERAL ELECTRIC

General Electric can co-ordinate all your electric equipment—from glue pots to press drives—to fit your individual requirements. Why not take advantage of experienced G-E application engineering. Just outline your needs to a G-E Printing Specialist in our nearest sales office and let him help you with your printing problems.

General Electric Company, Section E 653-3
Apparatus Department, Schenectady 5, N. Y.

Please send me a copy of your bulletin GEA-4670 which describes the electronic press drives and control.

Name.....

Address.....

City..... State.....

GENERAL ELECTRIC

BEVERIDGE DRY MATS

Manufactured and distributed by

the New Products Division of

THE BEVERIDGE PAPER COMPANY

705 W. WASHINGTON STREET • INDIANAPOLIS 4, INDIANA

√ **BEVERIDGE HI-SPEED MATS**
for curved newspaper work

√ **BEVERIDGE X-QUALITY MATS**
for high shrinkage

√ **BEVERIDGE MULTI-CAST MATS**
for autoplate equipment

√ **BEVERIDGE SPECIAL MULTI-CAST MATS**
for exceptional durability and release

√ **BEVERIDGE HI-CUSHION MATS**
for commercial flat work

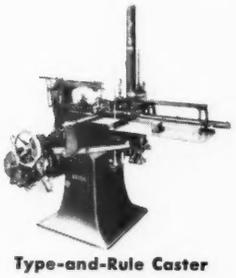
All mats available for immediate shipment plus a complete line of stereotype supplies and equipment

60 YEARS' EXPERIENCE IN MAKING PRECISION PAPERS IS EMBODIED IN BEVERIDGE DRY MATS

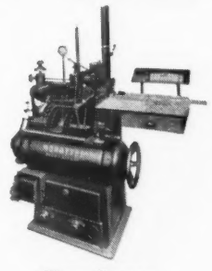
TIME

The Most Costly Element in Production

The simplest way to cut costs in the ad room is to make certain that no man ever has to waste time looking for material or cutting it to size . . . Lost time is piled up when men stand idle waiting to set display on a hand-operated line casting machine for which hot mats must be laid back in a case before another line can be set and cast . . . Wage scales can be maintained, overtime can be cut down, and the total payroll can be reduced by flowing to the hand man all of the material needed . . . Cases and racks can be filled—kept filled—streamlining production in the ad room every hour every day.

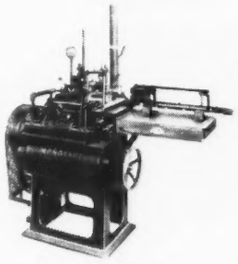


Type-and-Rule Caster



Giant Caster

Monotype-Thompson



Material Maker

This is Non-Distribution, which means No Distribution at any time

The Monotype Type-and-Rule Caster, the Giant Caster, the Monotype-Thompson or the Material Maker produce everything the hand man needs, much faster than he can distribute—casting into stock from which the cases and racks are supplied in a never-ending profusion . . . No other system of ad room operation is simpler or more flexible; it is based on the plain fact that hand men are trained to set type . . . They will set type swiftly and easily if they have type to set . . . No mass-production industry moves more surely to the finished product.

LANSTON MONOTYPE MACHINE COMPANY

Twenty-fourth and Locust Streets, Philadelphia 3, Pa.

WATCH NEW ENGLAND!

There are great things in store for YOU!

★ Our new **"REGAL" Monocork** is just the first of a line of startling developments in press packings.

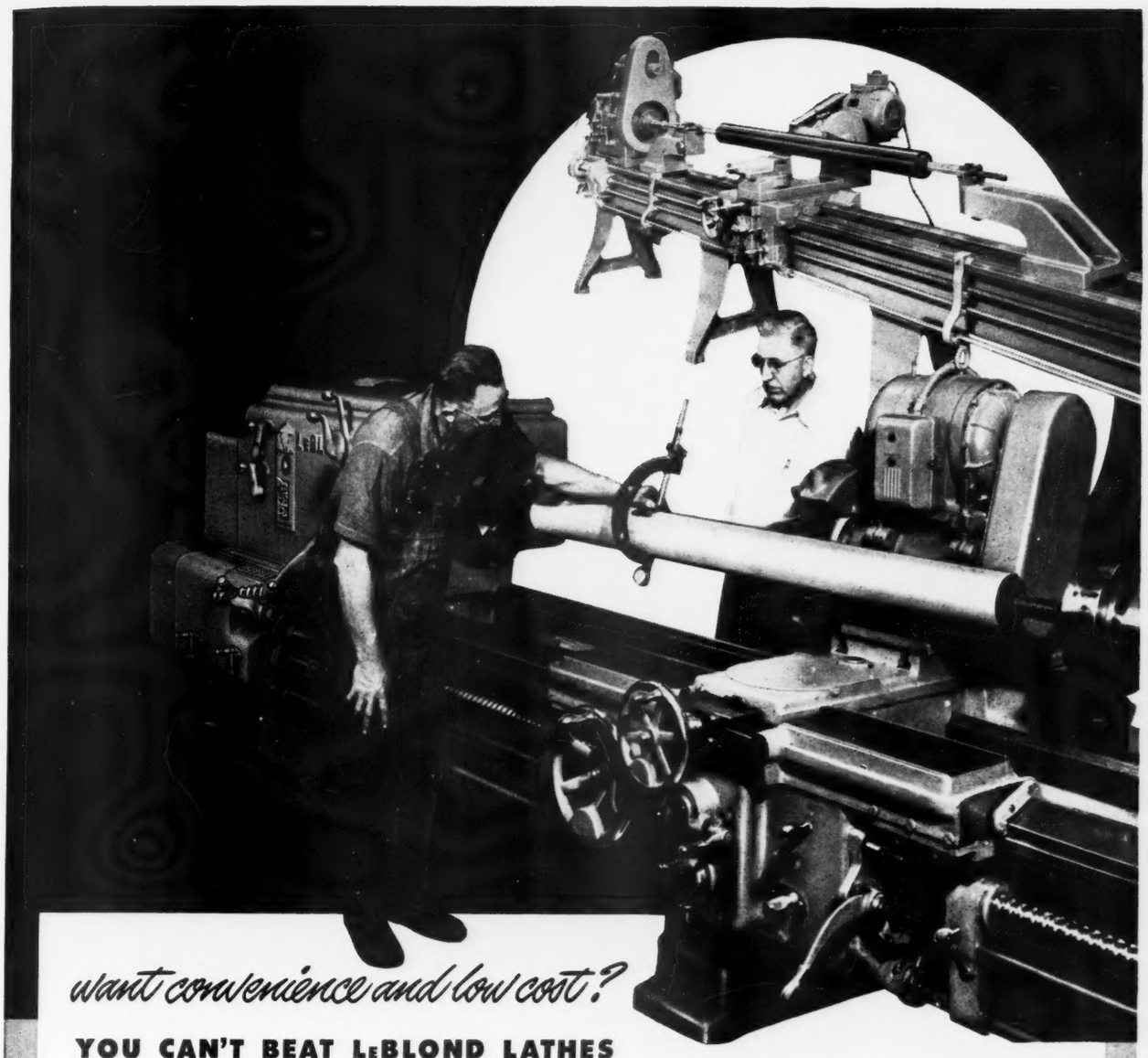
★ The near future will bring to the pressman a choice of blankets or combinations that eliminate many of the ills heretofore regarded as unavoidable.

. . . JUST WATCH US! . . .

NEW ENGLAND NEWSPAPER SUPPLY CO.

Branches:
NEW YORK
CHICAGO
SAN FRANCISCO
TULSA

164 FREMONT STREET • WORCESTER, MASSACHUSETTS



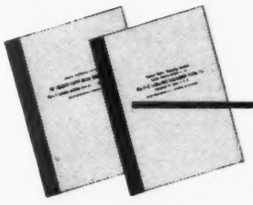
want convenience and low cost?

YOU CAN'T BEAT LeBLOND LATHES FOR POLISHING PRESS ROLLS

The special LeBlond Roll Grinding Lathes are without equal for fast, accurate, low cost grinding and polishing of press rolls. If yours is a newspaper, printing shop, or publishing house, LeBlond meets your needs with the special dual purpose Regals in two sizes: The 19″ with 2 H.P. grinder which will handle all rolls from 3″ to 9″ diameter; and the 24″ with 2 - or 3 - H.P. grinder which will accommodate rolls up to 14″ diameter. Both Regals double as engine lathes.

Or, if your press runs are counted in hundred thousands, and you need greater power, LeBlond's special 25″ heavy duty lathe with 5 H.P. grinder will take any roll up to 13″ diameter. It, too, is adaptable for metal turning.

Both the Regals and the Heavy Duty combine the turning facilities of a lathe with the polishing action of a grinder, mounted on the carriage. You can order any bed length that meets your requirements. Learn now how LeBlond roll grinding lathes can help you cut costs.



WRITE FOR

descriptive folders

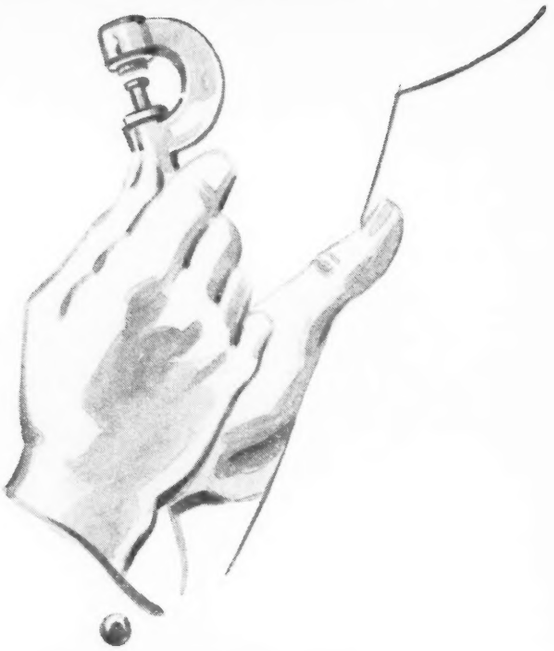
THE R. K. LeBLOND MACHINE TOOL CO. CINCINNATI 8, OHIO
LARGEST MANUFACTURER OF A COMPLETE LINE OF LATHES
SALES OFFICES: New York, Philadelphia, Chicago, Detroit

LeBLOND

Compare!

For Cleaner Impressions with Less Wear....

it's TINGUE TRADE MARK PRINTING PRESS BLANKETS



TINGUE DRAWSHEETS

TOP

This drawsheet is firm, durable, economical and long-lived.

IMPROVED SATISFACTION

Coated with "Calvaprene" by du Pont, on a fabric which has been impregnated with "Neoprene".

GOLD TYMPAN CLOTH

An old favorite for flatbed presses. Skivered metallic surface accepts excess ink and flakes it off without smudging.

TINGUE COATED BLANKETS

TINGUE FELT

Available in your guage and size with synthetic rubber coating.

COMBINO

A synthetic, laminated top blanket, extremely durable and a clean printer.

TINGUE UNDERBLANKETS

CUSHION CORK BLANKETS*

Highly resilient and recommended as the underpacking for "Combino" and Tingue Coated Felt or in combination with Foundation Blanket where a drawsheet is used.

FOUNDATION BLANKET

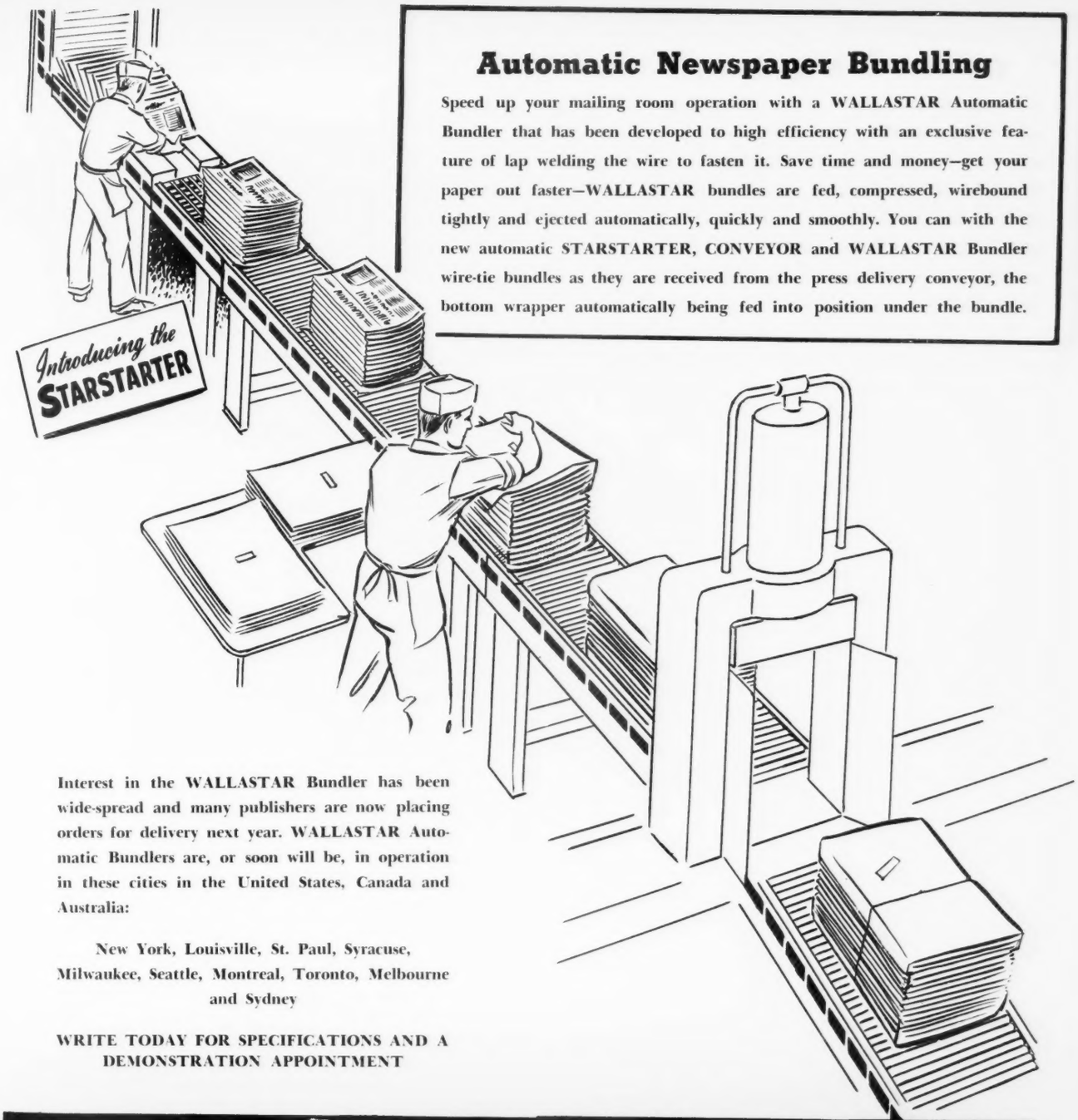
A firm durable oilproof underpacking laminated by du Pont with "Neoprene" for use in combination with "Cushion Cork" and Tingue Drawsheets or Felt.

*Reg. U S. Pat. Office

TINGUE BROWN AND COMPANY

114-120 EAST 23rd STREET, NEW YORK 10, N. Y.
1227 WABASH AVENUE, CHIGAGO 5, ILLINOIS
723 E. WASHINGTON BLVD., LOS ANGELES 21, CAL.
507 PETERS STREET, S. W., ATLANTA, GEORGIA

CANADIAN SALES AGENTS
ROSS WHITEHEAD & CO., LTD.
MONTREAL, CANADA



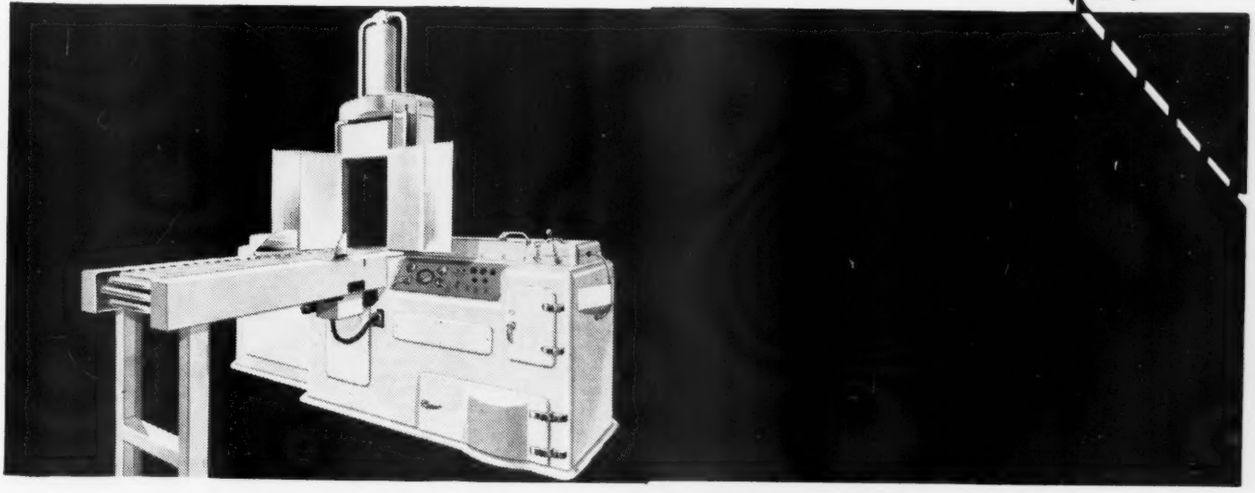
Automatic Newspaper Bundling

Speed up your mailing room operation with a WALLASTAR Automatic Bundler that has been developed to high efficiency with an exclusive feature of lap welding the wire to fasten it. Save time and money—get your paper out faster—WALLASTAR bundles are fed, compressed, wirebound tightly and ejected automatically, quickly and smoothly. You can with the new automatic STARSTARTER, CONVEYOR and WALLASTAR Bundler wire-tie bundles as they are received from the press delivery conveyor, the bottom wrapper automatically being fed into position under the bundle.

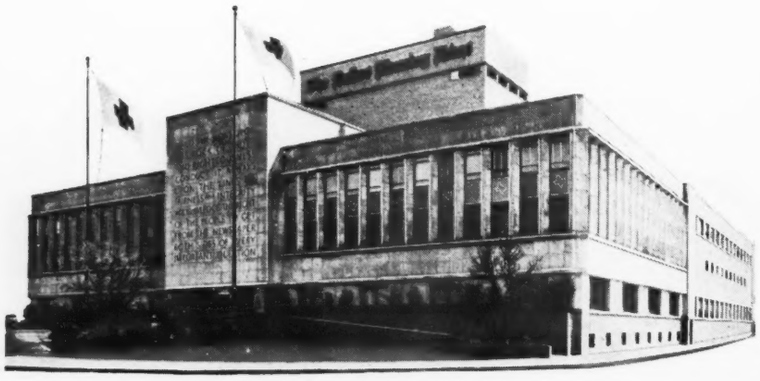
Interest in the WALLASTAR Bundler has been wide-spread and many publishers are now placing orders for delivery next year. WALLASTAR Automatic Bundlers are, or soon will be, in operation in these cities in the United States, Canada and Australia:

New York, Louisville, St. Paul, Syracuse, Milwaukee, Seattle, Montreal, Toronto, Melbourne and Sydney

WRITE TODAY FOR SPECIFICATIONS AND A DEMONSTRATION APPOINTMENT



THE DALLAS MORNING NEWS



. . . USES *JAMPOL METHODS* FOR HANDLING ROLLS OF NEWSPRINT, STEREOTYPE PLATES AND MAILROOM PRODUCTS.

For more than twenty-five years, Jampol engineers have specialized in the design, manufacture and installation of functional equipment for handling production traffic of the modern newspaper plant.

Jampol Methods and Equipment, recently installed in the modern, streamlined Dallas Morning News, are one big reason why every edition reaches the street faster and more efficiently!

●

THE JAMPOL COMPANY, INC.

728-742 61st Street, Brooklyn 20, N.Y.

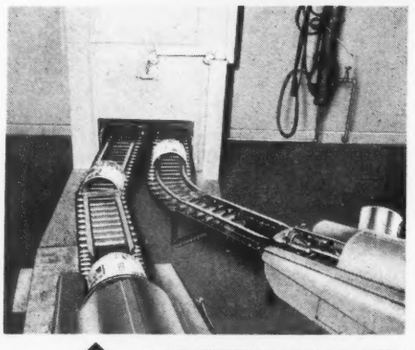
CANADIAN FACTORY: Sherbrooke, Quebec

NEWSPRINT CONVEYOR

Approximately **180** feet long, this equipment moves rolls of paper directly from freight cars into the paper storage and reelroom at a rate, if necessary, of up to **300** per hour.

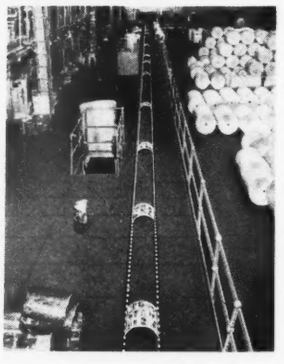
NEWSPRINT TRACK SYSTEM

Quickly transfers the rolls directly to reels of press.



STEREOTYPE PLATE CONVEYOR

Moving Stereotype Plates from Autoshavers to drops which lower them to the pressroom is a continuous operation, dependable and efficient.

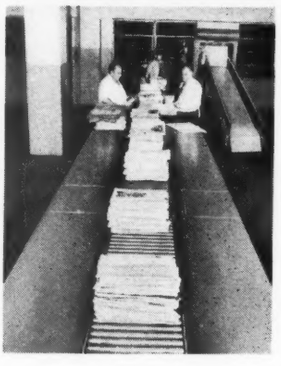


PRESSROOM PLATE CONVEYOR

This equipment distributes stereotype plates to presses with rhythmic efficiency.

NON-SLIP PRESS FLOORS

The Jampol name has long been associated with this safe, efficient type floor.



FEEDER-CONVEYOR

An integral part of every Jampol installation, it carries loose stacks of papers to the wire tying machine. Belt conveyor delivers tied bundles and mail bags to the platform belt conveyors for delivery to the trucks.

The New dayco
LITHOGRAPHIC BLANKET
FOR BETTER OFFSET PRINTING

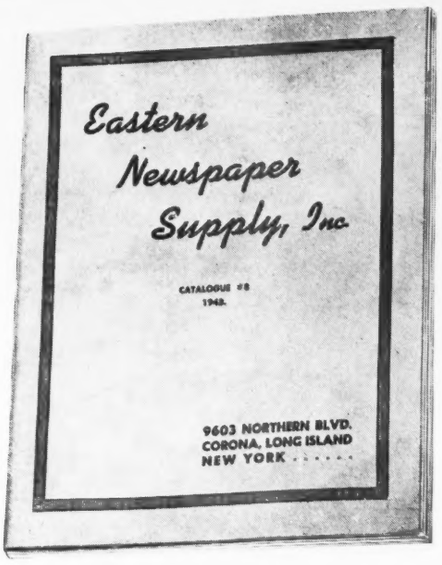
From Dayton Rubber's experience in pioneering improvements for better printing comes the new Dayco Lithographic Blanket. It prints dots as clean and sharp as the dots on your plate. You get firmer high lights, cleaner shadows, better impressions.

This new Dayco Blanket has just the right resilience—resists embossing and debossing, glazing and tackiness. It has uniform thickness. Its stretch is controlled to less than 2%. Made to last longer, this Dayco Blanket withstands chemicals in inks, and is not affected by wash-up solutions. Dayco has the blanket for your particular needs. Order yours today. Write: *The Dayton Rubber Co., Dayton 1, Ohio.*

by **Dayton Rubber**

Pioneers of Improvements for Better Printing with lithographic, letterpress & newspaper Rollers; Color Separators; Fountain Dividers and Lithographic Blankets.

LET THIS CATALOG BE YOUR GUIDE...



TO ECONOMICAL PRINTING PRODUCTION

Here, at your fingertips, is your key to certain dependability and efficiency in your printing production supplies and equipment! For every phase of production operations.... pressrooms, composing rooms, stereotype and engraving departments.... these tested supplies save money **every** edition.

- **PLATE-TAK—The SUPER-THIN Cut Mounting Tape**
- **TRU-MOLD CORK MOLDING BLANKET**
- **FLECTO GUMMED BACKING FELT**
- **EASTERN CIRCULAR SAWS**
- **ROYLE ROUTING CUTTERS**
- **EASTERN ROUTER BELT IN ALL SIZES**
- **DIRECT PRESSURE MOLDING MATERIALS**
- **CURVED AND FLAT CASTING BOARD**
- **COMPOSING ROOM AND STEREOTYPE EQUIPMENT**
- **STEREOTYPE HAND MITTS**
- **THE NEW DICK MAILER**

REPRESENTATIVES FOR:

STA-HI CORPORATION Master Former Premier Shaver Power Form Lift Vacuum Casting Box
AMERICAN STEEL CHASE COMPANY Newspaper Chases Make-Up Trucks
H. B. ROUSE COMPANY Accessories and Equipment
CHALLENGE MACHINERY COMPANY Composing Room Equipment

SEND YOUR ORDER NOW! **If you do not have our catalog, or want an additional copy, we'll mail you one on request.**

Eastern for Economy

EASTERN NEWSPAPER SUPPLY, INC.
9603 Northern Boulevard, Corona, L. I., New York

Fine, Fast, Low-cost Production

in less than twenty square feet

THE ATF Little Giant is produced by the creators of the internationally famous Kellys, first fully automatic cylinder presses. The ATF Little Giants are designed to provide an easy-running, speedy and simple to operate printing press for practically any job that will go, or can be made up, into a 12″ x 18″ form. That includes the majority of the small job work in an average plant.

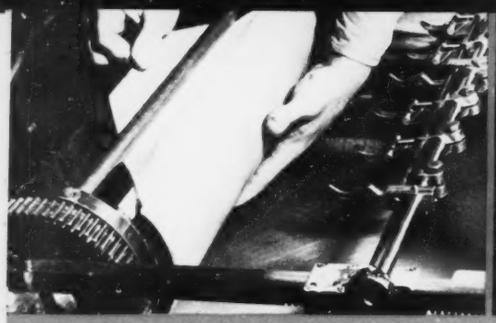
ATF Little Giants turn out cylinder press quality at less than automatic platen press cost. They handle any kind of paper stock from onion skin to 4-ply board, without changing the self-adjusting cylinder gripper tension.

In fact, most of the operating adjustments can be made while the press is running. Operating controls are on the outside of the press frame.

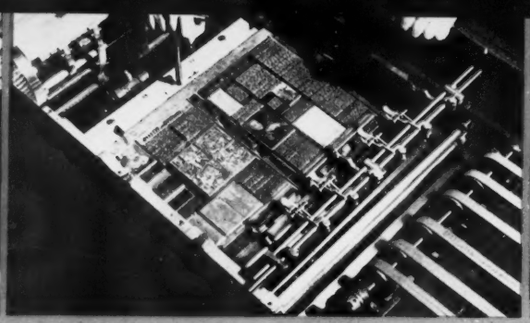
Reciprocating and rotating parts are covered with guards. Form changes or corrections can be made on the bed of the press. Every consideration possible has been given to the pressman's safety and convenience, and to ease of operation.

For specific features, see other side ➡

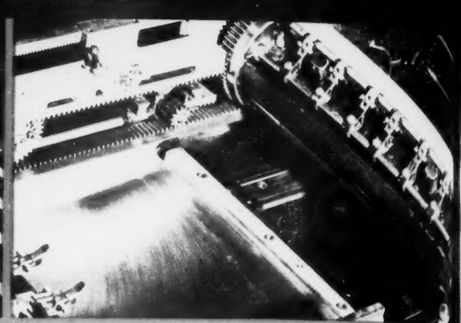
Printed in U. S. A



EASY MAKEREADY The Cylinder is readily accessible, reducing makeready time to the minimum. Special cylinder blanket, furnished as standard equipment, eliminates most makeready on "ordinary" job work.



SPEEDY LOCK-UP Entire form is exposed on bed for locking, unlocking, and corrections. Ideal for jobs requiring many press changes. 12" Lock-up Bar keeps forms "square" and speeds up locking chase on bed.



HAIRLINE REGISTER Cylinder and driving gear are in constant mesh. Prevents back lash and results in accurate register. Side guide can be shifted left or right instantly. Either side guide, or both, can be used.

The ATF LITTLE GIANT

is a modern press

with many modern features to save labor, time and money

In addition to those features mentioned at top and bottom of this page, it has:

Quick-set Feeder

Handles any stock from tissue to 4-ply card, 3¼" x 5½" to 12" x 18". Finger-tip adjustment sets pile; side guide is adjustable; front guides are set permanently. 17½" feeder capacity.

Envelope Feeder Attachment

For use with small envelopes and post cards, prevents pile from buckling or stock swinging sideways when leaving the suckers. Handles a whole box of envelopes (regular or window, end or side flap) at one loading.

Easy Speed Shift

V-belt drive with changes from one speed to another in a matter of seconds.

Automatic Double Roll

Forms of solids or heavy halftones can be double-rolled by pushing a plunger while press is running.

Heater and Non-offset Gun (optional equipment)

The printed sheet travels 36", from impression to jogger, under proper degree of heat for best ink setting and drying.

Specifications

Sheet size	3¼" x 5½" to 12" x 18"
Printing area	11¾" x 17½"
Type-bed size	15 1/16" x 18½"
Stock handling	Onion skin to 4-ply card (.018)
Speed range	2500, 3500, 4000 impressions per hour
Motor	1½ horsepower
Net weight	2120 pounds
Shipping weight	2535 pounds
Floor space	2' 10" x 7'

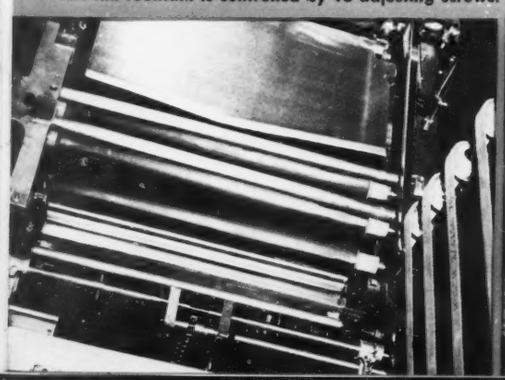
For further information and price, get in touch with your nearest ATF Branch Office. There are ATF Branches or Sales Offices in all principal cities.

American Type Founders

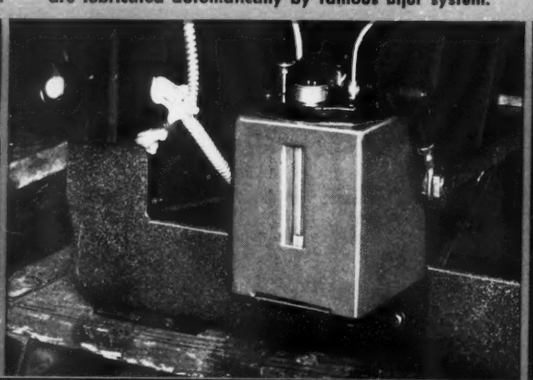
200 Elmora Avenue, Elizabeth B, N. J.

An ATF Associate

PERFECT INK DISTRIBUTION Press has four 2" rollers, besides steel vibrator and riders, and rubber ductor. Ink fountain is controlled by 18 adjusting screws.



LUBRICATION Positive lubrication on all main bearings by Alemite gun. Press tracks, pump and blower, are lubricated automatically by famous Bijur system.



EXTENSION JOGGER DELIVERY 23" capacity. Table lowers automatically at adjustable speed, and jogs sheets as they fall. A feature of large cylinder presses.

THE PROOF IS IN THE PRINTING

For newspaper color work and high grade commercial mats, Burgess Supreme Tone-Tex Mats are tops. The proof is in the printing.

Depth of impression and fidelity of reproduction are built-in qualities of every Supreme Tone-Tex Mat. They are your assurance of fine newspaper printing at all times.

Burgess will be represented at the A.N.P.A. Mechanical Conference to extend to you in person—best wishes for continued success.

A Laboratory Product
BURGESS
Tone-Tex
MATS

BURGESS CELLULOSE COMPANY

Manufacturers of Burgess Chrome and Supreme Tone-Tex Mats

FREEPORT, ILLINOIS

"What the self-starter did for the automotive industry . . .

Your Quadder is doing for the Graphic Arts!"

So writes John Milton Heins . . . of Hobby Linotype, Yonkers, N. Y.

Mr. Heins speaks with authority for he has two Star Quadders in his plant . . . and a third on order. Here's how he puts it:

"I've been so busy since my second quadder was installed that I haven't had time to write you how wonderful it is! What the self-starter did for the automotive industry, your super quadder is doing for the Graphic Arts! . . . the quadders have done everything asked of them and more!"

. . and here is another user's opinion

ACME *Typesetting Co.*
LINOTYPE COMPOSITION
4426 Grand Avenue
DETROIT 8, MICHIGAN
TE. 1-6257

March 9, 1949

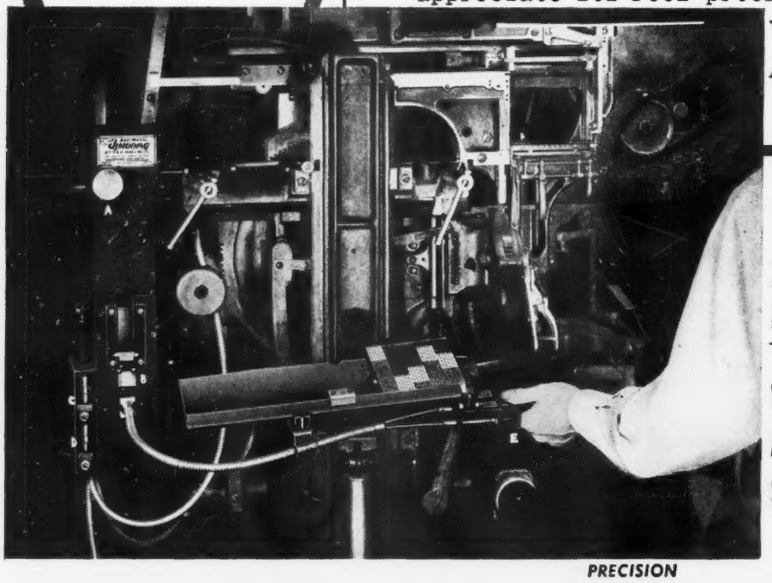
Linotype Parts Co., Inc.
South Hackensack, N. J.

Gentlemen:

In the relatively short time we have used your quadder it has done all you said it would do, and then some. The quadder should be seen in operation to appreciate its fool-proof construction.

Very truly,

ACME TYPESETTING CO., Inc.
BARNEY-MURRAY


A. Vise jaw adjusting knob
B. Short measure centering buttons
C. Pilot light (brake)
D. Pilot light (pump stop)
E. Main control buttons

These comments are picked at random from a flood of enthusiastic letters from Star Quadder users.

New machine prices are sky-high. Many are bought chiefly to secure automatic centering and quadding. This is not necessary. We have proved to present Star users—and are ready to prove to you—that a relatively small investment will bring you these advantages immediately—without sacrificing your present good equipment.

WRITE US FOR INTERESTING COLOR FOLDER AND COMPLETE INFORMATION AROUT THE STAR AUTOMATIC QUADDER

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
INCORPORATED

Factory and Main Office
SOUTH HACKENSACK, N. J.

Branch Office:
1327 BROADWAY, KANSAS CITY 6, MO.

CHICAGO • MINNEAPOLIS • DENVER • NEW YORK • BOSTON

Announcing the **SENSATIONAL NEW**

TALLY-TAB

AUTOMATIC SHEET COUNTER AND MARKER

$197

COMPLETE

**can also be supplied to mark any number desired. Price on application.*

A compact portable unit synchronized with your press. Automatically tallies and tabs by mechanical means in either 100's or 500's*, by inserting a marker tab directly into sheet delivery pile. Absolutely accurate. Indispensable wherever sheet count is important — processing, cutting, padding, folding, binding, etc.

Operates equally well on any size press — both litho and letterpress — and on any size sheet.

Easily installed — meets all electrical specifications anywhere in the world.

MILLER-LAUFFER

PRINTING EQUIPMENT CORP.

280 LAFAYETTE STREET, NEW YORK 12, N. Y. BArclay 7-9034

MILLER-LAUFFER PTG. EQUIP. CORP.
280 Lafayette St., New York 12, N. Y.

We are interested in the Tally-Tab. Contact us and arrange for demonstration.

*Name*_____

*Address*_____

How Imperial Zinc helps you save Make-Overs

• *Engraved on Imperial Zinc*

WHEN the separate sheets of zinc on a color job are burned in at different temperatures, or for different lengths of time, sometimes they "grow" to different lengths . . . unless the zinc is specially treated in advance as is the case with Imperial "Register-Redibak."

• In the "Register-Redibak" process, Imperial Zinc, after rolling, is heated to a temperature above the point where maximum "growth" occurs. This helps to eliminate subsequent variations as you burn in your flats . . . makes it easier to hold register . . . saves you expensive make-overs due to size variations.

• Try Imperial Zinc on your next color job. Order a case today. You'll agree there *is* a difference.

Imperial Zinc

A Product of

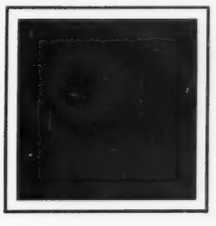
IMPERIAL TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

Would you like an extra copy

of the new



handy ***COLOR GUIDE FOR NEWS INKS*** ®

If you attended the Mechanical Conference of the A.N.P.A. you received a copy of the new, handy IPI Color Guide for News Inks as an insert in the special Conference Edition of Printing Equipment Engineer. If you did not receive one, or want an extra one, we will be glad to send it to you. The Guide shows process colors, run of paper colors, colors for underprinting, halftone colors, in a practical arrangement which permits the selection of hundreds of colors. Also included are hints and suggestions on the selection of color combinations for various purposes.

International Printing Ink

Division of Interchemical Corporation

Empire State Building, 350 Fifth Avenue, New York 1, N. Y.

ATLANTA • BALTIMORE • BATTLE CREEK • BUFFALO • CAMBRIDGE • CHICAGO • CINCINNATI • CLEVELAND
DALLAS • DENVER • DETROIT • INDIANAPOLIS • KALAMAZOO • KANSAS CITY • LOS ANGELES • MEMPHIS
MILWAUKEE • MINNEAPOLIS • NASHVILLE • NEW ORLEANS • NEW YORK CITY • OAKLAND • PHILADELPHIA
PORTLAND • RICHMOND • ROCHESTER • ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • WADSWORTH.

"they only throw at the tree with the apples"

THE boys never bother to throw sticks at barren trees. They always attack the one with the luscious fruit. So it's no surprise that Tension Plate Lock-up has been the target of criticism and rumors.

Goss Tension Plate Lock-up has been eminently successful and has fulfilled every claim made for it. The advantages of this exclusive lock-up method have been thoroughly proved in daily operation in some of the nation's leading newspaper plants. On the strength of these performance records, Goss recommends Tension Plate Lock-up more confidently than ever before and will gladly furnish the complete list of users to whom you may refer for first-hand information.—The Goss Printing Press Co., 1535 S. Paulina St., Chicago 8, Ill. . . . Duplex Division: Battle Creek, Mich. . . . Goss Printing Press Co., Ltd., Preston, England.

it's **GOSS** *again*

THIS TRADEMARK IS YOUR GUIDE TO RELIABILITY IN PRESS OPERATION

For really efficient press operation, leading publishers specify the Cline System. They know the Cline trademark means reliability as well as safety and economy. It's their guide to the best press control equipment available.

Specify* CLINE MOTOR AND CONTROL *for all types of presses.

Unit Type Press Drives
Paper Reels and Automatic Tensions
Full Speed Automatic Pasters
Color Registering Equipment
Ink Pumps and Dryers
Paper Break Detectors
Newspaper Conveyors
Paper Roll Handling Equipment
Stereotype Plate Conveyors

CLINE ELECTRIC MANUFACTURING CO.

Main Office: 400 West Madison Street, Chicago 6, Illinois

Western Office
410 Bush Street
San Francisco 8, Cal.

Eastern Office
220 East 42nd St.
New York 17, N. Y.

Our customer list reads like a "blue ribbon" directory of America's most distinguished newspapers. The majority of daily newspapers are printed on Vulcan equipped presses.

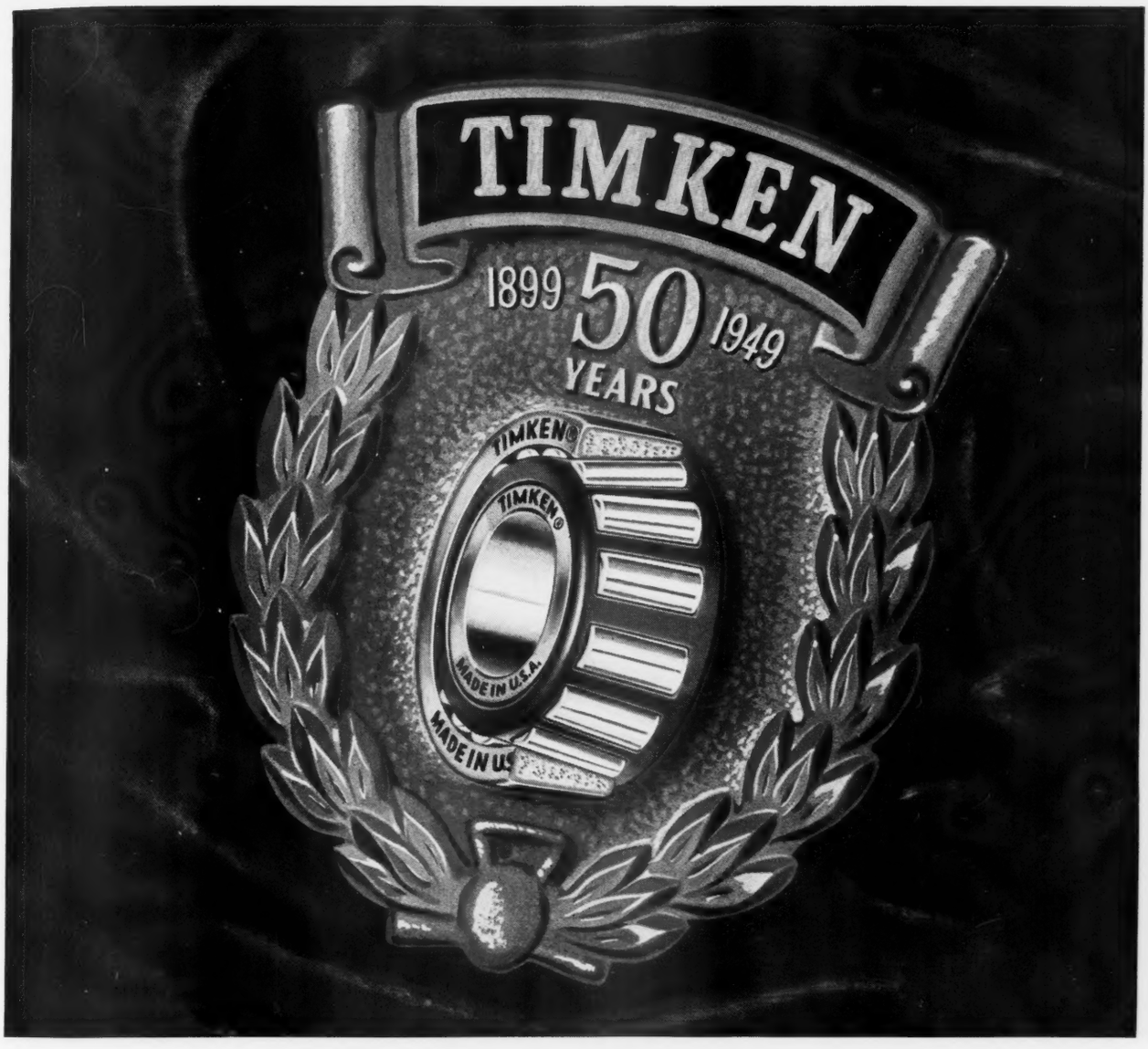
But the advantages of VULCAN Press Blankets are by no means confined to the largest metropolitan dailies. VULCAN press packing is a faithful friend of the pressman in the small and medium plants throughout the land.

VULCAN Blankets offer greater firmness, ideal uniformity of thickness. You need not overpack. You will get a cleanly printed sheet all over—longer press runs without press adjustments.

Let us show you what VULCAN Press Blankets can do for you—under your pressroom conditions.

Vulcan
PROOFING COMPANY
FIRST AVENUE & 58th STREET • BROOKLYN 20, NEW YORK

Pacific Coast Representative: THE CALIFORNIA INK COMPANY, INC.
Canadian Representative: SEARS LIMITED, TORONTO



50th birthday of the company whose products you know by the trade-mark: TIMKEN

SINCE 1899 THE TIMKEN ROLLER BEARING COMPANY HAS BEEN HELPING AMERICAN INDUSTRY GET THE MOST FOR ITS MONEY

NOBODY likes to buy a "pig in a poke". In America you don't have to. You're protected by trade-marks like "TIMKEN".

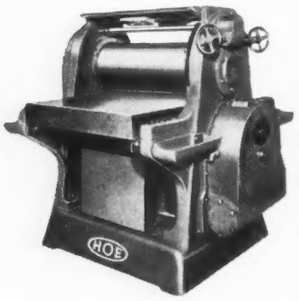
Registered as a trade-mark in the United States Patent Office, "TIMKEN" identifies products made by The Timken Roller Bearing Company: Timken tapered roller bearings, Timken alloy steels and seamless tubing and Timken removable rock bits.

Experience over the years has shown Timken products to be the finest in their respective fields. And many thousands of men and women are working hard to keep them that way. No wonder it has become a habit throughout industry to look for the trade-mark "TIMKEN". The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

World's most

OF PRECISION PLATE-MAKING

For the production of the highest quality of stereotypes and electrotypes, Hoe offers a complete line of precision machines, of which several of the most widely used are illustrated.

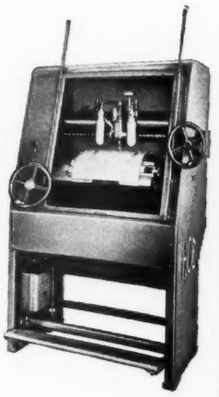


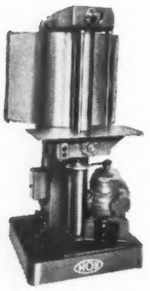
Monarch II Matrix Roller

Especially designed for plants with long, continuous operating schedules, the Monarch II provides the strength and rigidity, accuracy of adjustment, and precision of operation, essential for the highest quality of dry mat moulding.

Curved Plate Routing Machine completely enclosed

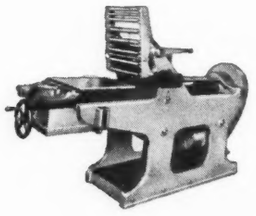
Ease of operation and sensitive control, plus strong and rigid construction, permits exceedingly accurate work. Full-vision, shatterproof glass in aluminum frame is counterbalanced so it can be raised or lowered with ease.





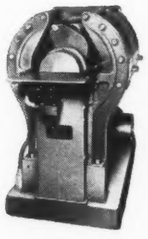
Vertical Plate Curving Machine

The vertical rollers permit feeding the plates on end, which simplifies the squaring operation, and a hand wheel gives micrometric adjustment of the rollers, insuring uniform curvature. The machine will curve plates from 9″ up in diameter; of any width up to 27″ along the straight edge; of any thickness up to ⅜″.



Precision Shaver for Flat Shaving

While plates as thin as ⅛″ can be shaved accurately on this machine, it also can shave up to .030″ in one cut, on plates as large as 18″ x 26″. An easy reading gauge shows exact thickness after shaving, which can be done accurately to .001″.



Curved Shaver and Cutting-Off Cylinder

A button control automatically clamps the curved plate in the shaving arch and starts the machine. In less than forty seconds the plate is shaved and its tail cut off in a single operation; the machine stops and the plate is unlocked.

Write for full information on Hoe's complete line

complete line

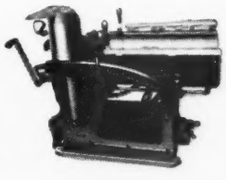
EQUIPMENT

Hydraulic Matrix Moulding Press

Touch the starting button, and in seven seconds this moulding press builds up a pressure of eight hundred tons on its 28″ x 32″ platen. Notable for its simple and fast operation, the press produces deep, sharp, uniform impressions; insures maximum accuracy for color work; holds mat stretch and buckling to a minimum.

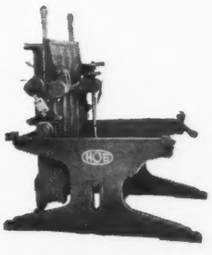
It is furnished for either cold or hot moulding, and for single or two-side operation.

800 tons pressure in seven seconds!



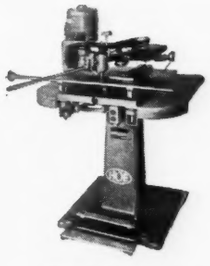
Equipose Curved Casting Mould

For producing superior stereotype plates for black or color printing, this self-balancing casting mould has an automatic cooling system which prevents defects from too rapid cooling. A vacuum device eliminates mat buckles and creeping, thus avoiding sinks and irregularities in the plate.



Speed Mould for Flat Casting

Designed for speed in setting the mats and casting, this mould can be quickly adjusted for type-high, base-high or shell plates by simply turning a hand wheel. Plates as large as 18″ x 24″ or as small as a column in width can be cast with equal facility.



Radial Arm Routing Machine

A counter-weight and heavy spring provide a sensitive, perfectly balanced router arm for work on flat plates. The high speed router head has precision ball bearings. The largest bits are held securely by a specially designed chuck.

of plate-making equipment.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

HUBER'S STAFF IS HERE AGAIN

Wherever you're from, you'll find the Huber ink specialist from your area here at the A. N. P. A. Mechanical Conference in Chicago. He's your direct liaison to our extensive laboratories and factories, and can give you news of late developments as well as a forecast of long range projects now under way.

If you're interested in color, ask him to show you the new Huber R. O. P. Color Sample Book. This book was designed to save you "matching" time and to assure your advertisers of nation-wide color uniformity.

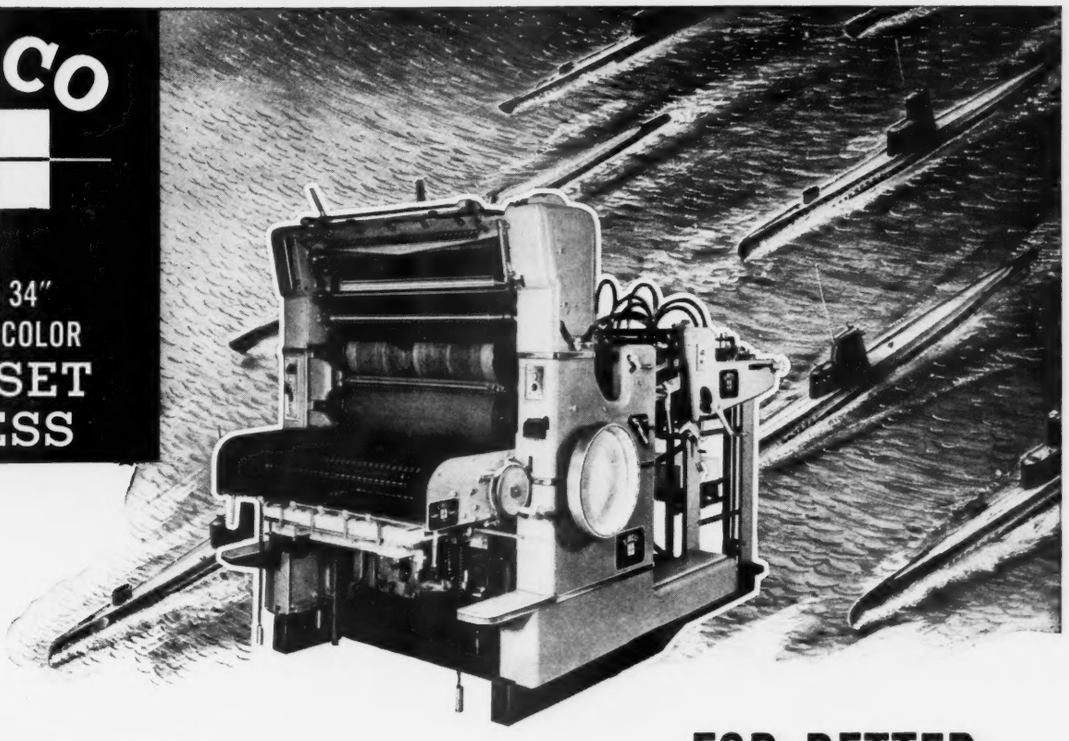
Now or any time, our experienced technical staff is yours to call on. There's a Huber branch office and warehouse near you. J. M. Huber Corporation, New York. Chicago: *59 E. Van Buren Street, WAbash 9157.*

HUBER

HUBER PRODUCTS IN USE SINCE 1780

EBCO

22" x 34"
SINGLE COLOR
OFFSET
PRESS



Full Speed ahead FOR BETTER LITHOGRAPHY!

For 50 years world-famous as the producer of precision-built submarines, ELECTRIC BOAT COMPANY turns its engineering genius **toward better lithography!**

dozens of improvements in offset press design! Greater accessibility! More positive controls! Speedier operation — up to 6,000 sheets per hour! Greater productivity — less downtime! Cleaner, sharper registry! In fact, everything about it is simpler, surer, speedier **— there's more profit in every run!**

looks different, too! Its coat of soft green makes it easier on the eyes. Safer. all controls outlined in yellow with flags of red for points of lubrication. Less operator fatigue — higher worker morale!

and you can be a proud E. B. CO owner soon! E. B. CO PRESSES are available NOW — advanced manufacturing techniques have accelerated production schedules hence no delays in delivery! Write for specifications and information.

EBCO

E.B. CO REGISTERS WITH LITHOGRAPHERS EVERYWHERE

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK
400 WEST MADISON STREET, CHICAGO 6, ILLINOIS
RUSS BUILDING, SAN FRANCISCO, CALIFORNIA

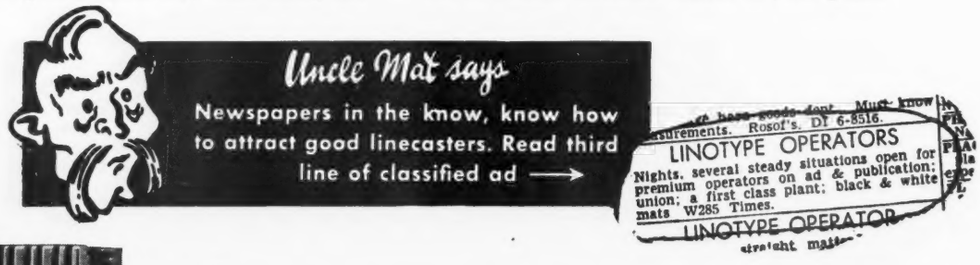
Prevent
This
Committee Given Powe
At the same time, they authorized their 35-man rank-and-file steering committee to represent them in negotiation swith any brewers willing to abolish the offending clause.
The strikers, rankand-file members of the United Brewery Workers (CIO), have been defying the international union's executive board and the executive boards of the seven locals involved.
Local Offices Wo Over.
Paul O'Dwyer, counsel to the strikers said a number of officers of the locals have swung over to the rank-and-filers, the latest being John Campbell, president of Local 24.
The Brewers Board of Trade was silent regarding the failure of the back-to-work formula it had drafted with some of the union's officials, but indicated it would make a statement later

with

MATRIX CONTRAST COLORS

In recent years, there has been a tendency for "wrong font" errors to increase because of frequently changing operator personnel, as well as the use of more fonts on each machine. The problem of wrong fonts is much greater, usually, in plants which operate more than one shift a day or more than five days a week. Where two or more operators are using the same machine, one operator may turn off the power before all the matrices on the distributor bar have been released. Another operator then may come along and switch magazines before turning on the power, so that the matrices on the distributor bar will drop into the wrong font magazine when the power is turned on again.

When matrix reference marks on each font are processed in a different eye-catching color, "wrong font" errors are plainly visible in the assembling elevator and are quickly detected and corrected before a single line is cast. Write our nearest office for complete information on the use of Matrix Contrast Colors in your plant.


Uncle Mat says
Newspapers in the know, know how to attract good linecasters. Read third line of classified ad →
LINOTYPE OPERATORS
Nights, several steady situations open for premium operators on ad & publication; union; a first class plant; black & white mats W285 Times.
LINOTYPE OPERATOR

Matrix Contrast Service

Empire State Building, New York 1, N. Y.—326 W. Madison Street, Chicago 6, Ill.—1105 Trenton Street, Los Angeles 15, Calif.— Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge St., Clerkenwell Green, London, E. C. 1.

ANPA

Program Features

★

IT APPEARS that publishers of the American Newspaper Mechanical Conference were satisfied with the initial session on human relations which was instituted at the Pittsburgh ANPA Mechanical Conference in 1948. Both sessions on Monday, June 6 this year will be devoted to industrial relations.

The conference is being held at the Palmer House, Monday, Tuesday and Wednesday, June 6, 7 and 8. Edwin H. Evers, Production Manager of the St. Louis *Globe-Democrat*, is chairman of the committee.

In his opening remarks, Chairman Evers will discuss *Conference Objectives in Industrial Relations*. He will be followed by Col. W. T. Rockwell, Chairman of the Board, Standard Steel Spring Co. A. C. Croft, President of National Foreman's Institute, who appeared on the 1948 program at Pittsburgh, will discuss *Foremanship Development*. Another speaker who is not unfamiliar to ANPA Mechanical and Production Executives is R. L. Miller, Manager, Standardization Div., Curtis Pub. Co. He will discuss *The Employee's Stake in Scientific Management*.

A rather down-to-earth discussion should take place when H. E. Perkins, a newspaper executive who is Vice President of Minneapolis *Star* and *Tribune*, talks on *Need for Sound Personnel Program in a Newspaper Plant*. The last speaker on the Industrial Relations section of the program is Edward Cheyfitz, Asst. to President of the Motion Picture Assoc. of America. His subject is *Employers and Employees*.

Other important topics make up the balance of the program. Among them are ANPA Research, Xerography and Xeroprinting, Fire Symposium, Composing Room Operation, Plant Expansion and Construction Symposium, Color Conditioning, Visual Planning, Preventive Maintenance, Magnesium in the Newspaper Plant, Report on Lens-O-Matic Cold Grid Printer, Copy Preparation for Newspaper Reproduction, and a movie: *Modern Photoengraving*.

On the last day, Wednesday, June 8, the entire morning program will be presented by newspaper mechanical executives. First on the program is Pressroom Operation, a discussion led by Horace Parker, Press-Stereo Foreman, Richmond (Ind.) *Palladium-Item*; Worn Clips and Clamps, by R. N. McKechnie and James Harrison, both of the Toronto (Ont.) *Globe* and *Mail*; *Newsprint Waste*, Earl Weiskittel, Pressroom Foreman, Youngstown (O.) *Vindicator*; ROP Color Production, C. R. Snethen, Mechanical Supt., Waukegan (Ill.) *News-Sun*; *Direct Pressure Molding*, by Wallace Wood, Stereo Foreman, St. Louis *Star-Times*.

The closing session on Wednesday afternoon will be led off with AAAA-ANPA Joint Committee on Newspaper Printing report; next comes Color Comic Advertising by Stanley Myers, Asst. Mechanical Supt., Philadelphia *Bulletin*; R. E. O'Dowd, Retail Adv. Mgr., Cincinnati *Enquirer*, will discuss *Advertising Copy Deadlines*; an interesting subject is *Profitability of Running ROP Color*, which will be discussed by R. H. Hackett, Adv. Mgr., Youngstown (O.) *Vindicator*; the closing feature will be a movie entitled *The Intaglio Way*, to be presented by Intaglio Service Corp.

ANPA Mechanical Committee

EDWIN H. EVERS, Production Manager, St. Louis (Mo.) *Globe-Democrat*. Chairman, ANPA Mechanical Committee.

WILLIAM BAUMRUCKER, Jr., Adm. Asst. to Bus. Mgr., New York (N. Y.) *News*. Chairman ANPA Research Committee.

C. M. FLINT, Research Director, American Newspaper Publishers Association.

VERNON R. SPITALERI, Manager, ANPA Mechanical Dept.

Early in May, ANPA President Edwin S. Friendly announced appointment of Vernon R. Spitaleri as Manager of the ANPA Mechanical Dept. Spitaleri had served as Acting Manager since retirement of Former Manager W. E. Wines in November 1948.

Manager Spitaleri isn't exactly unacquainted with the newspaper production and mechanical field. He became a printer's devil for a weekly newspaper at the age of 12.

There seems to be a blank space between the time he started his apprenticeship until he was awarded the degree of B.S. in Printing from Carnegie Tech.'s Engineering School in Pittsburgh. Anyhow, during the war he attained the rank of Lieutenant, USNR, commanding an LCI. He also established and coordinated the Navy printing and photographic facilities in the South Pacific which involved setting up letterpress and offset plants, training seamen to fill such jobs as line-composing machine operators, camera men, offset press operators and platemakers.

He's been with the ANPA Mechanical Dept. since 1946 as Assistant to Mr. Wines. His hobbies are music and cinemaphotography.

JOHN L. BLAKE, Scripps-Howard Newspapers, New York

T. A. CORCORAN, Purchasing Agent, Louisville (Ky.) *Courier-Journal* and *Times*.

RALPH R. CRANMER, Business Manager, Williamsport (Pa.) *Grit*.

B. F. GARRITY, Production Manager, Gannett Newspapers, Rochester, N. Y.

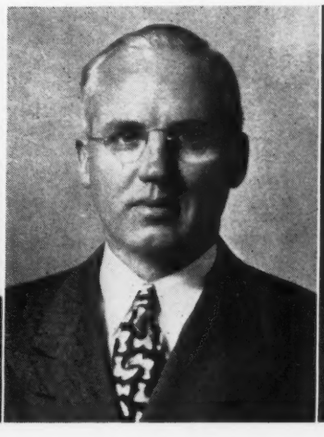
L. J. GRINER, Production Manager, Detroit *News*.

MAURICE A. HOGAN, Photo-engraving Superintendent Philadelphia *Inquirer*.

WILLIAM B. PAPE, Assistant Publisher, Waterbury (Conn.) *Republican* and *American*.

JOHN W. PARK, Production Manager, Chicago *Tribune*.

FRED W. SCHAUB, Treas.-Bus. Mgr., Decatur (Ill.) *Herald* and *Review*.



J. J. (Ted) SHEA, General Production Director, Hearst Newspapers, New York.

J. L. STACKHOUSE, President, Easton (Pa.) *Express*.

EARL WEISKITTEL, Pressroom Supt., Youngstown (O.) *Vindicator*.

Main Project Status ANPA Mechanical Research

THE ANPA Mechanical Research Committee made its printed report to the ANPA Convention, New York, April 1949. The Committee is composed of William Baumrucker jr., Chairman; R. R. Cranmer, R. E. Lent, J. J. Shea, J. L. Stackhouse, and Research Director C. M. Flint.

A summary of the projects is reported as follows:

Mat Packing—To develop a stereotype mat which will withstand metal casting pressures. After standardization tests, it is expected to release the mat to manufacturers for production purposes.

Automatic Router—First model has been completed. Principle has been proved. It is expected, within a few months, to approach manufacturers.

Direct Plate Printing—Involves printing without stereotype plates. Study includes printing from original engravings and also includes study of possibilities of offset being adapted to newspaper usage.

Printability—Study of what happens when ink meets paper probably is one of most important so-called long-range projects. Being handled under contract by Institute of Paper Chemistry, Appleton, Wis. When more is understood about the subject, the Committee will be able to advise and work with paper, ink and equipment manufacturers.

Mechanical Process Control—Being conducted under contract by Arthur D. Little Co., Cambridge, Mass. To include analysis of present production methods, and a recommendation of how to adapt for newspaper publishing purposes the best suitable process controls used in other fields.

Technical Services—Bulletin service to members was started in October 1948.

Research Laboratory—Has been established in Easton, Pa. Will be used for investigating materials and processes where can be done more efficiently and expediently than by others. Here, too, will be developed "our own ideas" which will be coordinated with the laboratory work of other outside companies and institutions. Laboratory is headed by Roy Prince, electrical and electronic engineer.

ANPA Research Progress

Illuminating Reports of Mechanical Research Accomplishments Made by Research Committee Chairman, William Baumrucker jr., and Research Director C. M. Flint

AFTER hearing addresses by William Baumrucker jr., chairman of the ANPA Mechanical Research Committee and by C. M. Flint, Research Director, the American Newspaper Publishers Association voted to place its research activity on a permanent basis. This action was taken at the recent convention at the Waldorf-Astoria Hotel, New York, in April.

For the research program, a fund of about $280 thousand was made available last year. The present research program assessment terminates July 1. The directors were instructed to make it a continuing association activity. At the 1950 convention it will be proposed to make the assessment a part of the annual membership dues.

The Committee

The Research Committee is composed of William Baumrucker jr., Chairman; R. R. Cranmer, R. E. Lent, J. J. Shea, J. L. Stackhouse, with C. M. Flint as Research Director.

Chairman Baumrucker stated "the subject of greatest interest to the publishing business at this time is one of rising costs. . . . One great hope for the research program is that it will enable our business to make changes which will permit us to face this condition of rising production costs with confidence that we can lick it."

The Real Problem

In explaining the situation with respect to the ANPA research program, Chairman Baumrucker stated: "Our business has no labor problem (wages per hour) insofar as costs are concerned. My meaning is that our true problems of cost right now are, to a very large extent, problems concerned with our lack of desire, lack of willingness, lack of ability, or perhaps downright fear to make use of methods, processes and equipment now available to us. This statement applies, of course, more directly to some newspapers than others . . . . Production problems in metropolitan dailies are more complex than they are in small, rural newspaper plants. It is easier to apply some of the newly available techniques in some small towns where competition and pressure from labor unions is not quite as serious."

He mentioned to his publisher audience that "the cost spectre hangs over all newspapers." He said "Most definitely there are many things that could be done right now to reduce cost if we would put them into effect."

Research Means Change

He warned his listeners that unless this business is truly ready and willing to use the results of research, all the research in the world won't have much effect on costs. . . . It means change. It means new kinds of equipment in many cases. It means new and unfamiliar materials.

Pursuing the thought further, he said: "I will say that change implies more than new methods. It implies that we have got to recognize whole-heartedly that some of our equipment will be out-moded. I have heard talk about research designed to make use of existing equipment, research designed to protect the capital investment we have in plants and so on. Obviously, these things should be considered, but I am sure that a research program in a straight-jacket will fail. New developments take new and unpredicted courses and quite probably much of what is now familiar in a newspaper plant will change.

"We do not expect changes in our capital equipment to be required suddenly but they are sure to come. Let us not worry about them but welcome them. We are playing for big stakes, not small percentages, and when the kind of savings we hope for have been proved, I do not think we can afford not to change the equipment."

Department's Aims

Continuing the subject, Mr. Baumrucker stated that among other activities

(Continued on Page 112)

Production and Mechanical Executives, Louisville (Ky.) *Courier-Journal* and *Times*

M. George Martin
Prod. Mgr., *C.-J.&T.* & Std. Gravure Corp.

Harold Leppert
Asst. Production Manager

Charles Bronger,
Supt. Photoengraving Dept.

C. Frank Mann,
Supt. Composing Room

John C. Steele, Supt.
Stereotype Dept.

Geo. T. Mitchell,
Supt. Pressroom

Robt. J. Speed, Supt.
Mailing Room

By M. GEORGE MARTIN*

**Production Manager, Louisville (Ky.)* Courier-Journal, *Louisville* Times *and Standard Gravure Corp.*

THE *Courier-Journal*, Louisville *Times* and Standard Gravure Corp. plant covers almost a city block in downtown Louisville, Ky. Completed in August, 1948, it is one of the newest structures of its kind in the world, with late-model equipment. In its functional plan, scientific consideration was given each department in regard to proper working space, relationship to other departments, heating and air and sound-conditioning.

Heading both newspaper and gravure corporations are: Barry Bingham, President, Mark Ethridge, Vice President and General Manager, and Lisle Baker, Jr., Treasurer.

The office building, set on the corner of Broadway at Sixth, extends along the Broadway frontage for 120.6 ft. and down Sixth for 130 ft. The mechanical building, to the rear, is 200 ft. by 201 ft. It is seven stories tall in front and four stories in the rear and has 333,128 sq. ft. of floor space. Fifth, sixth and seventh floors are reserved for AM, FM and TV facilities of the newspaper-owned radio station WHAS, but include the newspaper color photography facilities, home consultant's kitchen, employee cafeteria and the state bureau of The United Press.

Two Buildings in One

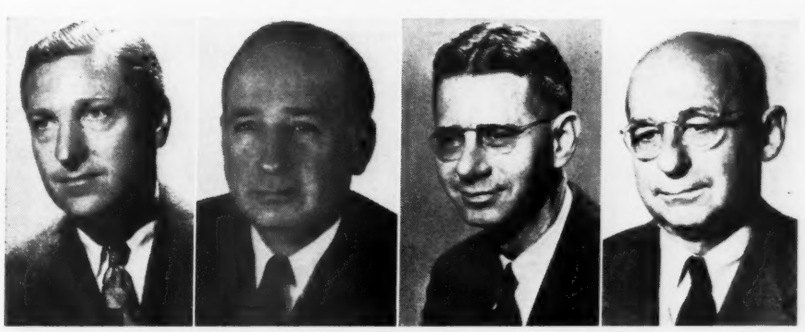
Two inches of space between office and mechanical buildings are packed with rubber and cork to isolate noise and vibration and to serve as a joint for expansion and contraction. Structural steel supports the office, while re-enforced concrete is used principally in the mechanical building.

The handsome Broadway entrance is faced with Bedford limestone and trimmed with aluminum, including the letters on the "sig-cut" nameplates on the East and South walls of the building. Across the entrance is a 12 ft. by 14 ft. bas-relief, symbolizing Kentucky and designed and executed by Marshall Fredericks.

Elegant Lobby

The unusual oval lobby boasts a fresco by Henry Varnum Poor. It depicts Kentucky pioneers and state scenes, covering 639 sq. ft. of wall space. The lobby itself

Officers and Management Executives, Louisville (Ky.) *Courier-Journal* and *Times*, and Standard Gravure Corp.



Barry Bingham
President

Mark Ethridge, V.P.
and Gen. Mgr.

Lisle Baker jr.
Treasurer

Henry M. McClaskey
Asst. Gen. Mgr.

Business and Mechanical Executive Staff Standard Gravure Corp.

Harry J. Mullin
General Manager

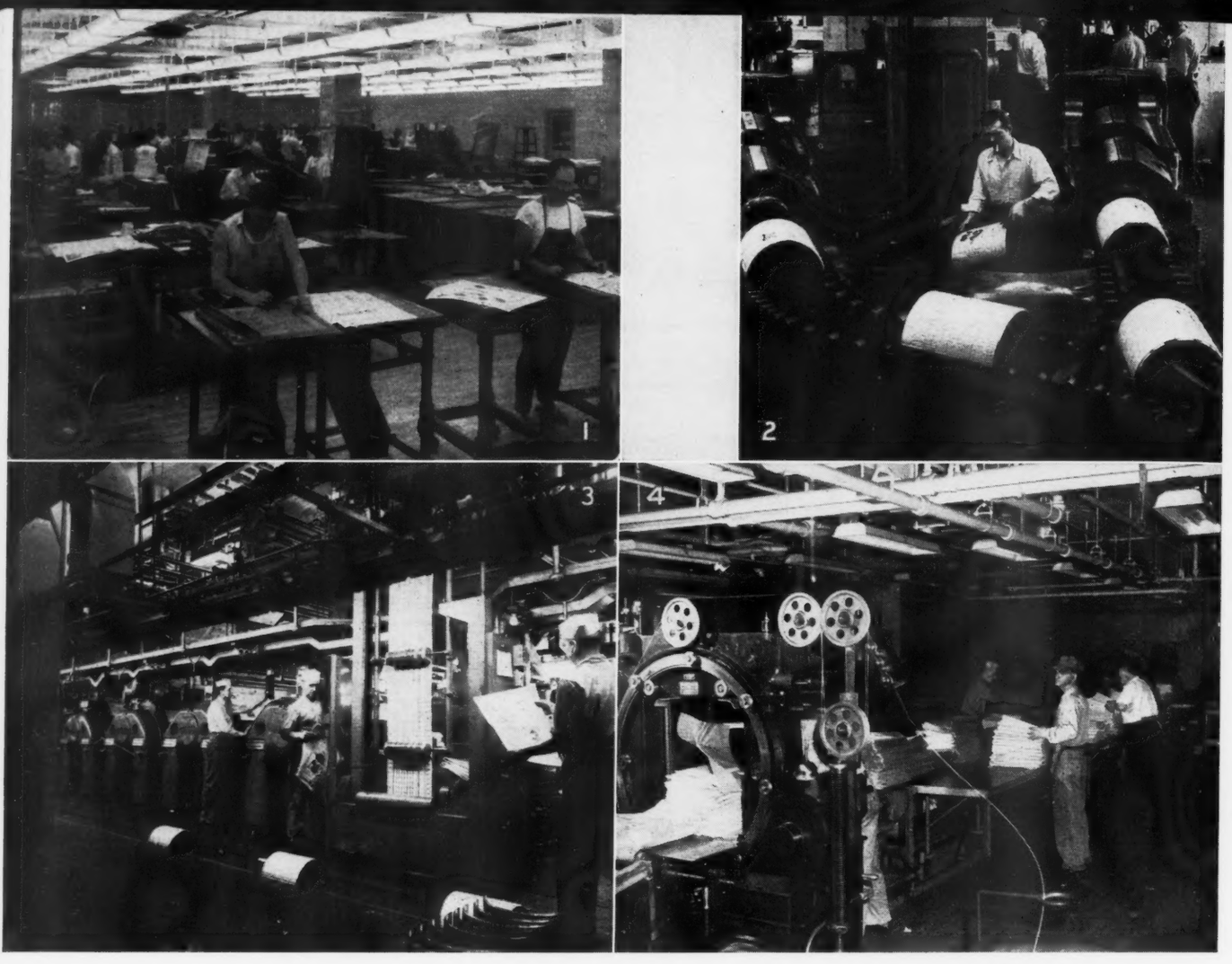
Edwin Keller
Sales Manager

Melzar Lowe
Asst. Prod. Mgr.

Arthur Simmonds
Superintendent

Fred Bourne
Asst. Supt.

Les J. Newmeyer
Pressroom Supt.



Views in Several Mechanical Departments, Louisville (Ky.) ***Courier-Journal*** **and** ***Times.***

1.—This is a view in the makeup section of the composing room. In this section, lighting is provided by special fixtures of diffusion glass lighted to approx. 100 foot candles. Each of the fixtures is fitted 440 w. lamps, diffusion glass at each side and egg-crate diffusers at the bottom. Seeing by makeup men is effortless and glareless.

2.—This view of a section of the stereotype department shows plates from the Wood Heavy-Duty Autoshavers traveling along the Lamson conveyors to the chain-type drop which will deliver them to the pressroom below.

3.—Some of the 16 units of Goss newspaper rotary presses. The presses are set in a 175 ft. line and weigh 558 thousand lbs. The capacity of each combination of press units is 60 thousand papers per hr., but at present are operated at 40 thousand per hr. Means are provided to equip the presses for four-color printing at a future date. Presses are equipped with Cline drives and controls, automatic tension plate lockup; electrically controlled inkflow ink equipment.

4.—One of the three lines of processing conveyors in the mailing room. These conveyors running the length of the room operated by mailers are designed to handle the output of the 16 unit Goss press. Papers are delivered by conveyor to the south end of each processing conveyor. After the papers have been stuffed and wrappers have been placed around the stacks they are passed into one of three Signode-Parker wire tying machines. After having been wire-tied, the bundles are shoved into a metal chute where they skid downwardly onto a belt conveyor on the loading dock. The bundles are deflected off the belt into the delivery trucks.

is 32 ft. wide, 26 ft. high and 48 ft. long. Its rare materials combine Rouge de Vitrolles marble, imported from Southern France, black radio marble, gold leaf and Terrazzo marble flooring. A revolving globe of the world, girdled with a band of etched glass Zodiac figures, is suspended from the ceiling. It was created by Joseph Vasconcellos.

Except for the decorative lobby, the plant is streamlined for strict efficiency. It was designed by Lockwood-Greene, Engineers, New York. Assisting architect was Joseph Kolbrook, Louisville. Built by the Struck Construction Co., it is the largest structure put up in downtown Louisville since the erection of the Heyburn Building in 1927.

Floor Occupancy

Newspaper offices cover the first four floors of the office building. First floor: Auditing, lobby, cashier, classified ads, information and service bureau, mail desk, personnel, public relations and promotion and telephone department (central switchboard).

Second floor: Advertising, circulation, advertising conference room and classified advertising telephone room.

Third floor: Executive offices, editorial offices, editorial and business conference rooms and library.

Fourth floor: News room, Sunday department, art department, news photography department, women's departments and state bureau of Associated Press.

Seventh floor: Color photographic studios and experimental kitchen suite.

Mechanical Building

There are four floors in the mechanical building. First floor: Both newspaper and Standard Gravure Roto pressrooms and plating, cylinder storage, laydown, sensitizing, etching and printing rooms for rotogravure.

Second floor: Standard Gravure business offices, copy checking service, layout rooms, gallery, art room and superintendent's office.

Third floor: Mail room and stock room (for newspapers) and bindery (for Standard Gravure); plant Medical Department.

Fourth floor: Newspaper composing room, engraving, stereotype, flat casting, remelt and Monotype departments and dispatch room.

Examples of streamlined planning are the placement of both pressrooms just below the mail room and the bindery to which they are respectively connected by vertical conveyors. Standard Gravure dark rooms are situated directly above their etching room so that the constant overflow of developing tanks helps flush acid from the etching room through the drains.

An unusual conveyor system for transporting rolls of newsprint from service entrance to basement storage is used for the convenience of both newspaper and rotogravure presses. The system was devised and constructed by the plant's maintenance department and engineers of the Lamson Company.

Air Conditioning

The entire plant is air-conditioned. The air-conditioning system consists of deep wells supplying approximately 1500 gal. of water per min. at 60 deg. Thirteen built-up air conditioning units were designed and constructed on the job to meet the requirements of the space each serves. This equipment includes a York 500 h.p. centrifugal Freon compressor with an approx. capacity of 550 T. and a York 300 h.p. Freon compressor the capacity of which is approx. 340 T. American Air Filter Electromatic electronic air filters are used throughout, except in the newspaper pressroom. The office building's zone control, whose general design was outlined by the plant engineer, is an unusual type. All fresh air is separately cooled and de-humidified before mixing with re-circulated air. After mixing, the air passes through either heating or cooling coils into hot or cold plenums. Mixing dampers take hot air either from hot or cold plenums as directed by the thermostat in the zone being controlled.

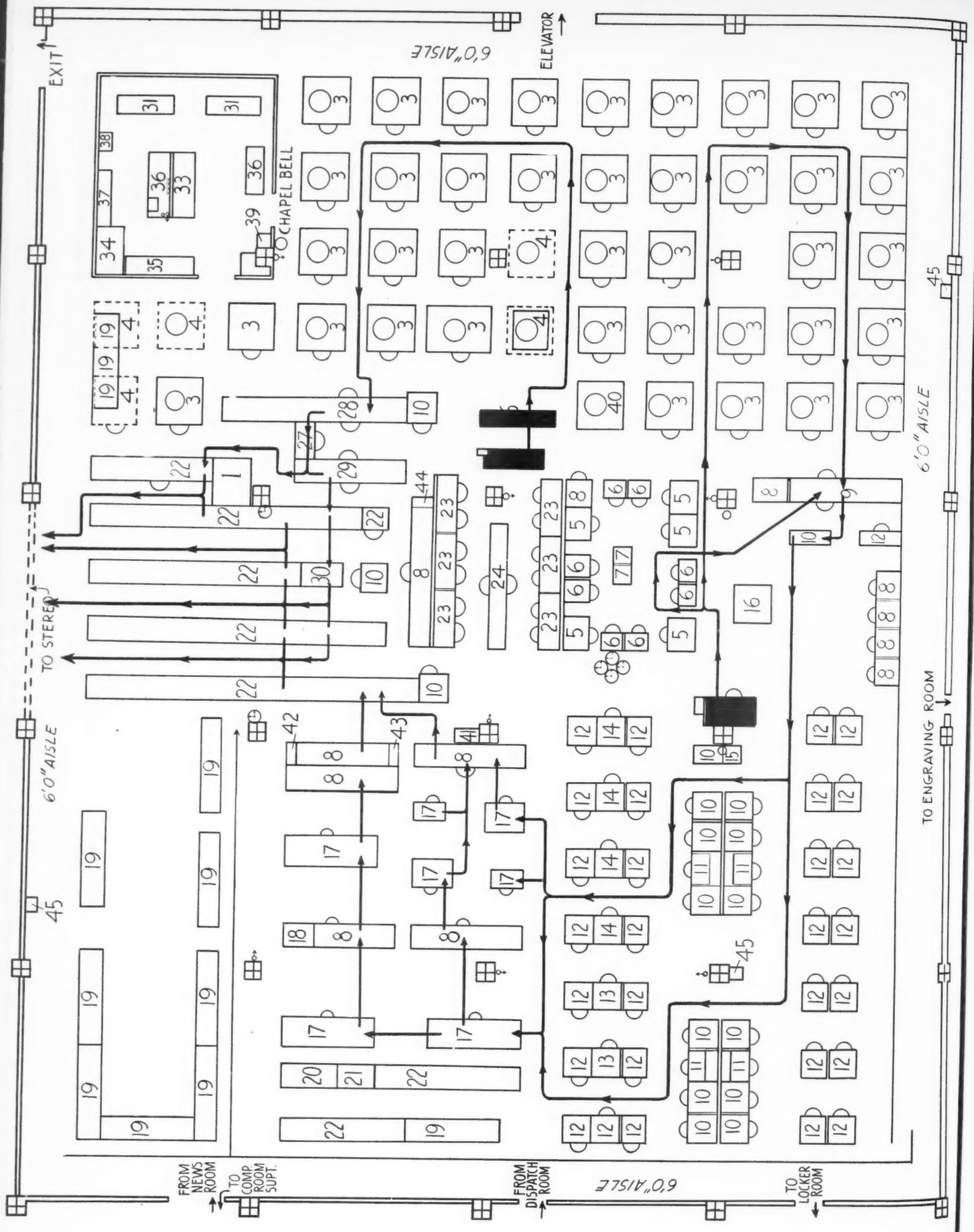
Ink Misting Eliminated

Each of the first floor pressrooms (both newspaper and Rotogravure) is supplied with 74,000 cu. ft. fresh air per min. In summertime this air is cooled by passing through 12 rolls of thin coils with 60 deg. well water circulating through the tubes. In wintertime the outside air is warmed and humidified to maintain from 45 to 50 per cent relative humidity in the pressrooms at all times. In the newspaper pressrooms, an exhaust fan is provided to take out slightly more air than is supplied. This is to prevent ink mist and paper lint from the presses drifting to other parts of the building. In supplying humidity to the pressrooms, the air-conditioning system will evaporate 200 gal. per hr. for each pressroom. Windows in the pressrooms are of double glass with heating coils in between to prevent condensation on windows.

The newspaper fourth floor mechanical department includes: Composing room, stereotype and engraving. An air-conditioning unit for this entire section supplies 31,000 cu. ft. of fresh air per min. and 10,000 cu. ft. of circulated air, which is pre-cooled to approximately 67 deg. by passing through water coils. Air is then moved through refrigerated water coils and cooled to 60 deg., at which temperature it is delivered to various rooms. "Zone" control here is obtained by reheat coils in zone ducts controlled by room thermostats. Other devices complement the direct air-conditioning system. In the stereotype depart-

Two Buildings in One—The Louisville (Ky.) *Courier-Journal* and *Times* and Standard Gravure Corp. plant covers almost a city block. At the front is the office building. At the left is the four-story mechanical building, 200 ft. by 201 ft.

View alongside one of the three Motter rotogravure printing presses in plant of the Standard Gravure Corp., Louisville, Ky. Two of the presses consist of 10 units and the other of eight units. Newspaper supplements as well as magazine signatures may be printed on these presses, since they are equipped with suitable folders for these purposes. The presses are set up for two webs with four colors on each side of one web and monotone on the other web.


EXIT
6'0" AISLE
ELEVATOR
CHAPEL BELL
TO STEREO
6'0" AISLE
6'0" AISLE
TO ENGRAVING ROOM
FROM NEWS ROOM
TO COMP ROOM SUPT.
FROM DISPATCH ROOM
6'0" AISLE
TO LOCKER ROOM

Composing Room Equipment Layout, Louisville *Courier-Journal* and *Times* — (For relationship to other departments on fourth floor, see Fourth Floor Layout, on this page.)

Composing Room Supt. Frank Mann's office is at upper left of composing room in fourth floor layout, this page.

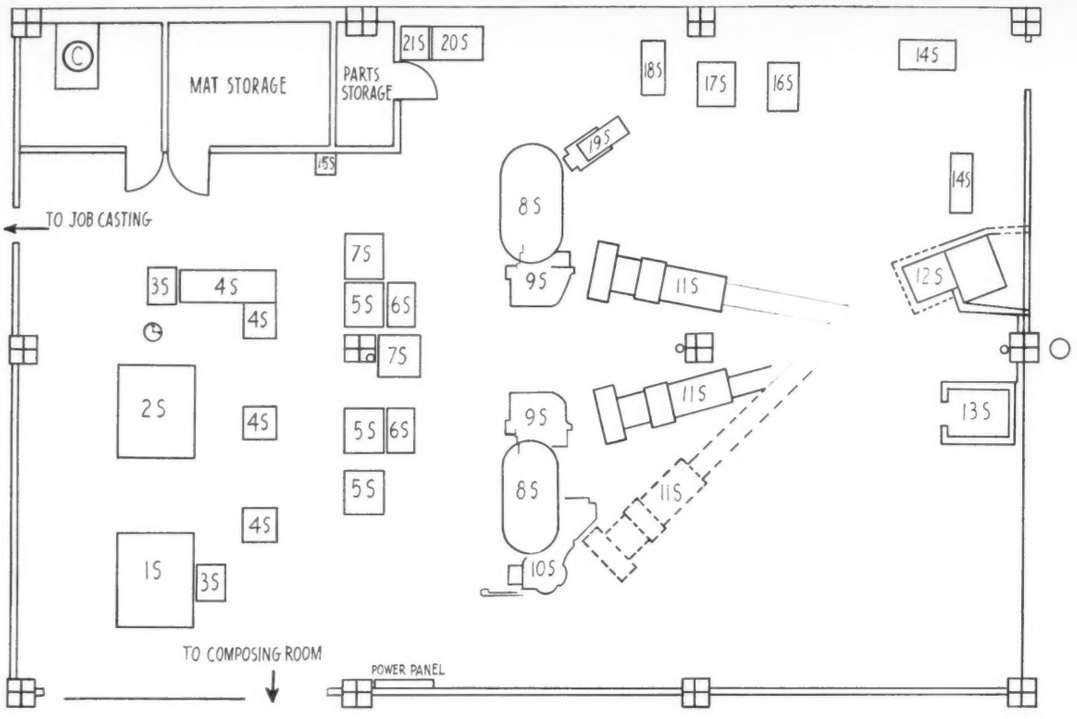
1—Foreman and Makeup Editor's Desk
2—Head Adman's Desk (with tube from Dispatch Room)
3—Ad and Straight-matter Linotypes
4—Future line-composing machines
5—Ludlow Casters
6—Ludlow Matrix Cabinets
7—Ludlow Supersurfacers
8—Storage Cabinet
9—Ad Dump
10—Miller and Hammond Saws—Trimmers
11—Rouse Mitering Machines
12—Ad Stands
13—Ad Stand Material Storage
14—Ad Stand Galley Storage
15—Morrison Slug Stripper
16—Table
17—Vandercook Proof Presses
18—Double Truck Chase Storage
19—Page Storage Tables
20—Makeup Table
21—Paper Storage Cabinet
22—Trucks
23—Proof Desks
24—Dictionary Table
25—Pneumatic Tube Desk
26—News Copy Desk
27—Vandercook News Proof Press
28—Assembly Bank
29—Correction Bank
30—Make-up Galley Storage
31—Elrod Casters
32—Lathe
33—Workbench
34—Desk
35—Parts Cabinet
36—Drill Press on Work Top
37—Storage Cabinets
38—Sink
39—Spaceband Board
40—Roto Makeup Stand and Storage Cabinet
41—Ink Roller
42—Small Storage, Classified
43—Small Storage, Editorial
44—Small Storage, Markets
45—Drinking Fountain
46—Operator Call Box

ment, all heat-producing equipment, metal and Sta-Hi machinery are hooded with exhaust fans; the tops of the two 10 T. melting pots are completely enclosed and each vented through a 14 in. diam. steel stack which goes straight through the roof. These vents prevent serious fire hazards caused by the accumulation of dross, dirt and ink mist. The mat storage room is air-conditioned to maintain the most desirable humidity condition for mat storage.

Two air conditioning systems are used in the rotogravure plant. Etching, layout and gallery have humidity control. It is maintained at 60 per cent winter and summer, controlled completely by automatic shifts. Air is exhausted through the ink-drying system on the presses. An automatic alarm system sounds in the operating engineer's office whenever additional refrigeration is required to maintain the desired conditions. Standard comfort air-conditioning is used in the pressroom of the plating room and bindery.

Remelting, Monotype and Stereo Job Room Equipment Layouts— (For relationship to Composing and Main Stereo Depts., see fourth floor diagram above.)

1SJ—Job Pot
2SJ—Flat Casters
3SJ—Saws and Trimmers
4SJ—Flat Shavers
5SJ—Jig Saws
6SJ—Flat Routers
7SJ—Emery Wheel
1M—Monotype Sorts Caster
2M—Monotype Material Makers
3M—Sorts Cabinet
4M—Storage Cabinets
5M—Work Bench
8SJ—Work Tables
9SJ—Flat Scorcher
6M—Parts Cabinet
7M—Sink
1R—Remelting Metal Pot
2R—Remelting Mold
3R—Remelting Hopper



Stereotype Page Casting Equipment Layout—(For relationship to Composing Room, see page 63.)

C —Stereo Supt.'s Office

1S—Lake Erie Directomat
2S—Hoe Molding Machine
3S—Mat Trimmer
4S—Packing Tables
5S—Sta-Hi Formers
6S—Mat Roasters
7S—Sta-Hi Final Trimmer
8S—10 T. Furnaces
9S—L. H. and R. H. Automatic Autoplates
10S—Junior Autoplate
11S—Heavy Duty Autoshavers
12S—Plate Drop
13S—Plate Return
14S—Curved Routers
15S—Drinking Fountain
16S—Pre-Registering Machine
17S—Curved Shaver
18S—Tail Cutter
19S—Hand Casting Box
20S—Saw Setter
21S—Saw Filer

Lighting

Lighting in the building is planned to operate closely with the conservation of air-conditioning energy. There is overall use of fluorescent lighting and of aluminum cool shades, stripped with copper.

Used throughout the building are Westinghouse standard office and factory fluorescent fixtures. Each is fitted with 440 w. lamps, diffusion glass at each side and egg-crate diffusers at the bottom.

In addition, in the composing room makeup area are special fixtures of diffusion glass lighted to approximately 100 candles. Other areas in this room have an approx. illumination of 60 candles.

In the engraving department special incandescent lighting is used over stripping room developing tanks.

Floors

Flooring varies according to functional needs of the various departments. A patented iron-bound woodblock arrangement was laid in the composing room, mail room, rotogravure bindery and corridor leading to mail room and bindery. This flooring is composed of hard maple strips, each 1 in. wide and 12 in. long, laid end grain and held together by metal strips.

Jal tread plate (a checker-board pattern steel floor plate) is used in the stereotype department.

Acid-resistant, water-proof Hubbelite floors are laid in the engraving department and corridors of the rotogravure plant. Mixed like concrete and with the same hard surface, it none the less offers a certain resiliency.

Office building floors required 75,000 sq. ft. of green Johns-Manville asphalt tile and 13,000 sq. ft. of base for installation.

Walls and Ceilings

Walls and most partitions in the mechanical building are cream-colored brick-size ceramic tile. Walls and ceilings in the office building are generally painted a silvery gray. Ceilings are all acoustically treated with 1¼ in. Celotex acoustical tile, except in the mail and pressrooms. Average ceiling heights are 13½ ft. center to center.

Color Code

Machinery and equipment in all departments is painted a shade of gray that does not absorb light, nor show marks and stains, is a restful shade to the eyes of employees and blends with the overall color scheme.

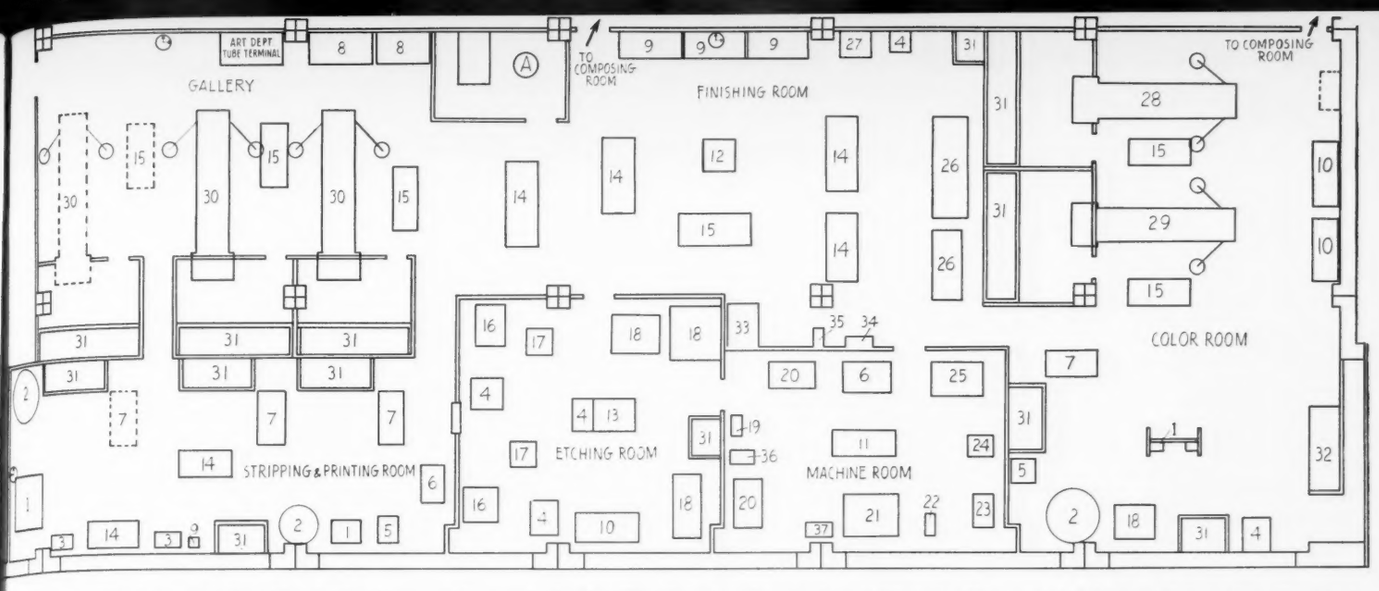
Comfort Facilities

Special facilities for the newspapers mechanical departments include (in addition to regulation plumbing fixtures): for the pressroom: Bradley fountains and 10 showers. For the composing room, and engraving and stereotype departments, the locker room for which cover 2980 sq. ft., Bradley fountains and 7 showers. In the rotogravure plant, accommodating press, Ballard (plating), laydown, printing, sensitizing and etching rooms are: Bradley fountains and 6 showers. Adjoining the offices of both pressroom superintendents are lavatories equipped with showers.

Composing Room

C. Frank Mann is Superintendent of the composing room which is one of the most modern in the industry. Its streamlined arrangement permits the sending of copy from copy cutter through to makeup in minimum time and motion. An average of 6 T. of metal is made into type each day, with 16 T. required for the Sunday *Courier-Journal*.

Composition principally is from 39 Linotypes (9 of which are new) and from Ludlow equipment for display work. Some display type cast on the Monotype is used for certain advertising composition. Two Elrod strip-casters are kept busy supplying spacing and rule material. In the accompanying composing room diagram, note the interesting arrangement of the advertising proof



Photoengraving Dept. Equipment Layout, Louisville *Courier-Journal* and *Times* —(For relationship to Composing Room, see page 63.)

1—Wesel, Douthitt and Sweigard-Ideal Printing Frame
2—Wesel and Brown Whirlers
3—Developing Tanks
4—Master Stoves
5—Drying Boxes
6—Niagara Guillotine
7—Master Stripping Tables
8—Masking Tables
9—Finishing Tables
10—Painting-In Tables
11—Mounting Table
12—Squaring-Up Tables
13—Rol-up Ink Table
14—Work Tables
15—Copy Table
16—Master Powder Boxes
17—Coolers
18—Master, Axel-Holstrom and Rotospray Etching Machines
19—Emery Wheel
20—Wesel Routers
21—Wesel Beveller
22—Milliken Nailing Machine
23—Vandercook Block Leveller
24—Delta Wood Saw
25—Saw and Trimmer
26—Vandercook Nos. 219 and 4 Proof Presses
27—Galley Rack
28—Consolidated Color Camera
29—Wesel Gallery Camera
30—Wesel Darkroom Cameras (Future camera indicated by dash lines)
31—Sinks
32—Supplies Storage
33—Alcohol Storage
34—Roller Rack
35—Vandercook Register Punch
36—Shoot Board
37—Type High Gauge

presses. It appears there is no delay at any time in supplying proofs in quantity, or revised proofs for that matter.

Superintendent Mann believes in having plenty of spacing material (slugs and leads) right at hand for the convenience of the ad compositors. To provide a liberal supply of this material, specially built lead and slug racks are attached to the 35 single ad room assembly stands.

A total of 120 trucks and 120 chases compose an important part of the composing room equipment. Six additional chases are used only for advertising and editorial color.

There are 16 Schrader Tuckaway hoses, with 25 ft. reels. Made to order for the *Courier-Journal* and *The Times* is the copy cutter's desk with special drawer space for the two newspapers and for equipment. A copy control signal switch connected with each of 30 Linotypes permits the copycutter to call by individual signal operators from any one of the machines. The proofreaders are in a specially designed, semi-enclosed space with Hauserman partitions. Special fluorescent illumination includes 12 rows of lights, each 100 ft. long, totalling 1104 tubes.

Remelting Equipment

An electrically driven device, built according to *Courier-Journal* and *Times* specifications, handles scrap metal for remelting. This machinery serves both composing room and stereotype department. An iron hopper, holding approx. 12 T. of slugs, is equipped with reversible conveyor belts and metal buggies. Scrap is scooped into the buggies (each of which holds around 10 pages of slugs). The buggies move via conveyor belt to the hopper, where they are dumped. There are two outlets in the hopper—both to the composing room re-melting pot and the stereotype department job casting pot. Pressure of an electric button determines to which outlet the scrap is delivered. This machine was designed by H. Earle Runion, Engineer, and constructed by the Bushman Company, Cincinnati.

Photoengraving Dept.

Charles L. Bronger is Superintendent of the Photoengraving Dept. Upon referring to the accompanying equipment layout diagram, it will be seen that the department is divided into five rooms. This division into separate rooms is intended to provide production speed and economy of action. Newspaper and commercial photoengraving is executed in the department. For newspaper work, there are two Wesel darkroom cameras (*30* in the diagram) with provision having been made for an additional camera unit in the future. In the color room are two cameras—a Consolidated 38 in. darkroom precision camera (*28* in the diagram) and a Wesel 24 in. gallery camera (*29* in the diagram).

For newspaper halftone work, the engraving department uses 65 line screen. For color and commercial work, the halftone screens range from 65, 85, 100, 120, 133 up to and including 150 line.

For proofing purposes, one each No. 219 and No. 4 Vandercook proof presses are used.

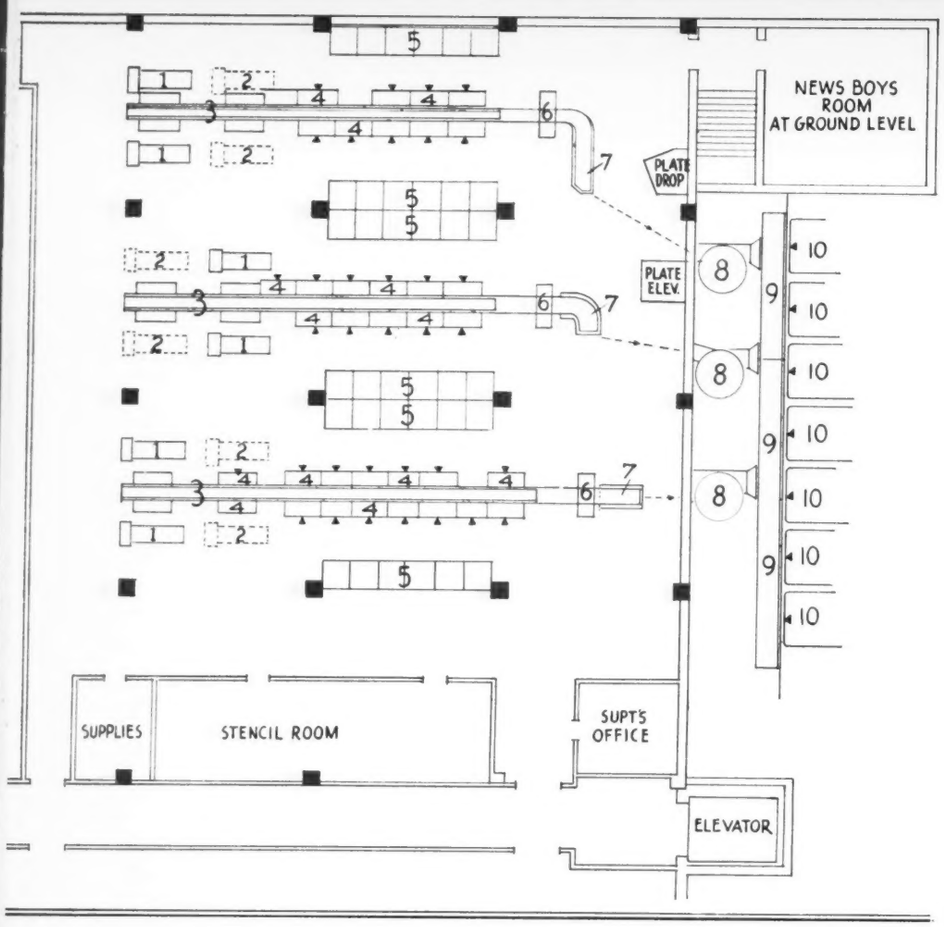
Stereotype Dept.

John C. Steele is Superintendent of the Stereotype Dept. The semi-cylindrical platemaking equipment has been arranged to provide continuous forward movement of work in process. The Stereotype Dept. is divided into sections—the main section for daily and Sunday plate production and a smaller room for flat job plate casting.

For molding equipment there are two machines—a Lake Erie Directomat Direct Pressure Press and a Hoe Heavy Duty Roller. Two Wood Automatic Autoplate and a Wood Junior Autoplate machines are operated in connection with two 10 T. Kemp pots heated by gas. The immersion burners are fed by six Kemp carburetors (used four at a time with two in reserve) with Minneapolis-Honeywell gas valve motor controls.

It has been noted elsewhere in this article that the Goss Tension Plate Lockup is used in this plant. On the two Wood Heavy Duty Autoshavers, tension plate lockup milling sections are incorporated to mill out the pockets which are engaged by fingers in the press plate cylinders to hold the plates under constant tension.

It has also been noted in the Composing Room section of this article that six of the chases are used only for color work. These chases receive careful attention at all times to keep them in clean condition and to see that they have not lost their accuracy through the handling which sometimes occurs in daily production. All color plates are checked for press cylinder position on a Wood Tension



Mail Room Layout—Louisville (Ky.) *Courier-Journal* and *Times*. Following is key to accompanying equipment and workflow diagram in highly mechanized department.

1.—Folding apron conveyors which bring papers to mail room. Conveyors fold up out of way when not in use.
2.—Future.
3.—Free roller power slat conveyors.
4.—Newspaper processing tables.
5.—Comic and Rotogravure Sections.
6.—Wire bundle tying machines.
7.—Gravity chute.
8.—Spiral chutes to loading dock.
9.—Loading dock conveyors.
10.—Truck-loading stations.

Lockup Pre-register Machine. The color plate casting equipment is specially provided for the purpose and consists of a Goss Handcolor Box, Goss Archtype Curved Shaver, Sta-hi Master Router, and other necessary tools. All color forms are molded on the Directomat Direct Pressure Press.

Especially built for the two newspapers are the two electric storage roasters (designed and constructed by the newspapers' maintenance force), the plate conveyor (designed by Lamson) and the dead-plate return elevator from the pressroom, which carries by elevator a capacity of 40 plates per load on small skids.

Pressroom

George T. Mitchell is Superintendent of the Pressroom. Both newspapers have in operation a battery of the latest model Goss newspaper rotary presses consisting of 16 units and 3 folders. They are set in a 175 ft. line, almost the length of the pressroom and weigh a total of 558,000 lbs. Mounted on an 18 ft. concrete block in the basement, they rise almost to the ceiling of the two-story pressroom. Future expansion has been considered and there is space reserved for another set of presses of equal size. Each combination of press units has a capacity of 60,000 papers per hour but at present are run at 40,000 per hour. The presses are also equipped for 4-color printing at a future date. Incorporated with the presses are Cline drives and controls on all presses; the automatic tension plate lock-up; electrically controlled inkflow for newspaper; electrically controlled Colortrol ink equipment; color ink fountains for both one and two pages; reversible press cylinders for color printing; Cline automatic paster, and a specially designed plate conveyor belt system the track of which circles the pressroom and is connected with the stereotype department by a small elevator. Three vertical Cutler-Hammer conveyors move papers from the presses direct to the Mail Room above.

Mail Room

Robert J. Speed, Superintendent of the Mail Room, supervises the department which is equipped to count, bundle, address and send papers to the loading platform in less than 5 min. from the time they roll off the presses. Like other mechanical departments, straightline production methods are used.

H. Earle Runion, Louisville Production Engineers, provided the general design and layout of the equipment together with operational plans for processing the papers.

Three processing conveyor lines running the length of the mail room were provided to handle the output of the new 16 unit Goss press. Papers are delivered from the press by conveyor to the south end of each processing conveyor in the mail room. Papers are lifted in standard size stocks from the Cutler-Hammer pressroom conveyor and placed on the mail room processing conveyor.

There are makeup and inserting tables along each side of the three mail room processing conveyors. At the end of each processing conveyor the bundles are fed directly into one of three Signode-Parker wire tying machines. After wire tying, the paper bundles drop by gravity through a metal chute onto a belt conveyor on the loading dock. As the bundles of newspapers move along the belt conveyor on the loading dock they are deflected off the belt into the delivery trucks.

The mechanization of the mailroom operation has made it possible to handle the output of the new high speed press in a shorter time than was formerly possible. There is less work involved than before because the conveyors handle the papers between most of the mailing operations.

There is a separate room for handling subscriptions. Speedomat table machine, keyboards, lister and cabinets for subscriber mailing plates are used. In addition there are Addressograph keyboards, listers, and cabinets for Addressograph plates (agents' mailing lists).

Specially designed by the newspapers' maintenance department is the label

Registering

Color Plates

On Wood Base

THIS often difficult and tedious job may be made less troublesome if all the wood bases are made truly rectangular both in relation of top and bottom and of the sides to each other. As much of the furniture as possible should be hard metal and straight-thrust quoins should be used, taking care to lock them the same after each trial until register is attained. When pulling sheets for registering, the press should be running at the same speed as when sheets were pulled in preceding color or colors and two or three sheets at least pulled at the same speed.

rack, planned railroad ticket style, for mail sacks with destinations marked by tags with the paper's own label.

Standard Gravure Corp.

Standard Gravure Corp., (housed in the same building with the *Courier-Journal* and *Times*,) is one of the two newest plants of its kind and the largest in this part of the United States. Between 5½ and 6 million roto magazines are run off its presses weekly. This includes work for 13 newspapers and for *Parade*. The newspapers are: The *Courier-Journal*, Terre Haute (Ind.) *Tribune*, New Orleans *Times-Picayune*, Cincinnati *Enquirer*, San Antonio (Tex.) *Express*, Atlanta (Ga.) *Journal*, Columbus (O.) *Dispatch*, *Christian Science Monitor*, the Nashville (Tenn.) *Tennessean*, Indianapolis (Ind.) *Star*, Salt Lake City (Utah) *Deseret News*, *Columbia State*, Houston (Tex.) *Chronicle*, Newark (N.J.) *News* and Pittsburg *Post-Gazette*. All except the Terre Haute (Ind.) *Tribune*, the Cincinnati *Enquirer* and *Christian Science Monitor* are members of the Locally Edited Group.

Besides magazine work, Standard Gravure handles advertising brochures, booklets, pamphlets and monthly publications.

The plant's entire workflow is synchronized. Every piece of printing is numbered and moved in sequence from the time it is delivered to the copy service desk till it is tied in the bindery.

In the gallery two Wesel Monotone cameras and one each Wesel, Consolidated and ATF darkroom cameras are used. These are fitted with timing refinements suggested by the plant's maintenance department. There are 16 comparators with two-tube fluorescent lighting. Some idea of the volume of work going through the plant may be gathered when it is stated that in the Layout and Laydown department there are 41 shadow tables with fluorescent lights (designed and constructed by the plant maintenance department) and 17 tables equipped with 3-point suspension and register bars, also built by the maintenance department. This register system is reported to be speedy and accurate.

In the plating room three Standard Process copper-cyanide depositing tanks and two Motter polishing machines are used to process approx. 150 cylinders a week. The storage racks support 300 cylinders.

For magazine and special commercial printing, the Standard Gravure bindery is supplied with single and gang stitchers, cutting machine, a Seybold 3-knife trimmer, and two Wallastar automatic bundle-tying machines, as well as other equipment including bundle and package-tying machines, three Baum friction-fed folding machines, truck platforms and Logan belt and roller conveyors.

Printing 77 Colors in 3 Sec.

By PAUL WEST

WHEN a woman goes to a beauty salon to buy lipstick or nail varnish she usually selects a color from a color card. A machine invented in the United States dispensed with manual operations in preparing the sample cards, but the output did not exceed 1500 cards per day. In Britain, a revolutionary printing process was evolved before the war, by which the production of color cards is mechanized and an output of 1200 cards per hour is achieved. This equipment was developed by a British printing machinery manufacturer, McCorquodale and Co., Ltd., 15 King St., London, E.C.2. The outbreak of war however, prevented the exploitation of the process, which was not adopted in actual practice until early in 1946. (See Feb. 1947 issue *Printing Equipment Engineer*.)

The chief advantage of the McCorquodale method is the production in 3 sec. of a color card with 77 color shades printed simultaneously. This improvement on the manual method is effected as follows:

The new machine, which bears little resemblance to standard equipment of the printing industry, has four main parts: a rectangular tank, a matrix of steel or bronze, a printing plate, and a motor. The liquid colors are contained in the tank, which is divided into 77 compartments. Each compartment contains one color. The colors flow from the tank through 77 narrow rubber tubes into 77 recesses in the matrix. The card is fixed in position on the printing plate underneath the matrix, ready for printing. The machine operates with a high degree of precision so that the required quantity of each color is forced through a valve into the recesses of the matrix at the very moment the matrix comes into contact with the card. At once the 77 colors appear on the card; the matrix is lifted; the printed card is automatically passed on for drying, and automatically replaced by a fresh card. Within 3 sec. the printing of the second card is complete.

The finished sample card is a beautiful example of color-printing and a masterpiece of precision. The equipment prints color samples in all shades, and from high gloss to matt. The printing of color samples showing grains or textures such as those of wood or textile products is also possible. The color deposit on the card is of a thickness sufficient to take the impression of a steel die. In this way color samples imitating the actual appearance of various industrial products can be printed.

The company is at present engaged in research work concerned with the introduction of a thermo-drying system, and it is hoped to reduce the drying time from 12 hrs. to 12 min.

The McCorquodale color-printing process can be used also in other fields. In addition to the sample cards already described, similar cards are being extensively used in the paint industry, and in the textile, dying and plastics industries. The process lends itself not only to the production of color cards; it is suitable for every form of color display. It is expected, for example, that the production of colored Christmas cards and advertisements will be greatly stimulated by the introduction of the new methods.

The manifold applications of this color-printing process have attracted attention abroad, notably in the United States. As a result, the British firm has opened a branch in the United States, under the name of McCorquodale Process, Inc. (36-20 Thirty-third St., Long Island City 1, N. Y.) which will allocate licences for use of the equipment. The managing director of McCorquodale Color Display Ltd., London—James C. Sanderson, is also Vice President of the American firm, and Malcolm S. McCorquodale, is Chairman of the Board.

Wins Fourth Time

For the fourth year in a row the York (Pa.) *Gazette and Daily* has been awarded first prize in the tabloid competition in the recent N. W. Ayer exhibition of newspaper typography. It was the opinion of the judges that *The Gazette and Daily* employs excellent typography, makeup and presswork. Top personnel at the York tabloid are: Josiah W. Gitt, Editor, Treasurer and Owner; Charles M. Gitt, President; Louis F. Stone, Managing Editor; J. H. Keagy, Mechanical Superintendent; A. L. Parks, Day Foreman; and Paul Zarfoss, Night Foreman.

Defective Matrices

(Abstracted from address by B. F. Garrity, Production Manager, Gannett Newspapers, before PNPA Mechanical Conference, Harrisburg, Pa., April 1949.)

WE have a publisher who seems to take a keen delight in spotting a letter in the news columns that is out of alignment, or is not printing, marking the paper and sending it to the Composing Room. I haven't fully made up my mind as to whether he gets more enjoyment out of finding or not finding a defective letter. I must think to ask him sometime.

We remove damaged matrices from the magazine as soon as they are discovered. They not only give the news columns a sloppy look but they do not improve the other matrices in the font.

Matrices do cost more than they used to, but you must expect them to wear out. If your fonts are old there's a reasonable doubt if the cost of a new font would be much more in the long run than trying to take out the poorest ones and replacing them with new sorts. New sorts can soon show signs of wear and tear when mixed in with a badly worn font.

Aerial view of the new H. S. Crocker Co., Inc., San Bruno, Calif. plant, covering 3½ acres. The one story building is adjacent to rail, highway and air transportation. Loading dock runs along the right hand side of the plant to facilitate loading and unloading of supplies

Modern California Printing Plant

THE new H. S. Crocker Co., Inc., printing and lithography plant in San Bruno, Calif., seven miles south of San Francisco, was born of a dream and a necessity. H. S. Crocker Co., Inc., has over 600 employees in printing and lithography plants at San Bruno, Baltimore and Los Angeles, in 10 sales offices throughout the country, in Hawaii, and in retail stores in San Francisco, Fresno and Sacramento, Calif.

Prior to World War II, the Crocker organization found its business expanding. It was apparent that new equipment, housed in new quarters in or near San Francisco was needed for the Crocker Union Div.

Theory of One-Level Plant

Under the direction of President S. S. Kauffman, a committee of Crocker executives consisting of Richard Kauffman, W. E. Steege, Ed. LeVesconte and Fred Ahern, was formed to study the proposed project. Over a period of several years Mr. LeVesconte studied major printing establishments in every section of the country, noting their arrangement, equipment and production layout. His studies showed that maximum efficiency in printing and lithographic production could best be realized with a one-level plant. This would automatically eliminate the need for vertical hauling and transfer between departments inherent in a multiple-story building. But a one floor plant of the dimensions needed requires space. It was decided to build the new structure in the suburbs of San Francisco, rather than in the city itself. An 11-acre tract of level land was acquired adjacent to rail, highway and air transportation.

Plant in Suburbs

By locating in the suburbs, plant employees could, if they so wished, make their own homes within a rural area. According to Crocker executives, it has been demonstrated repeatedly that plant employees with suburban homes and gardens usually are happier and make better workmen.

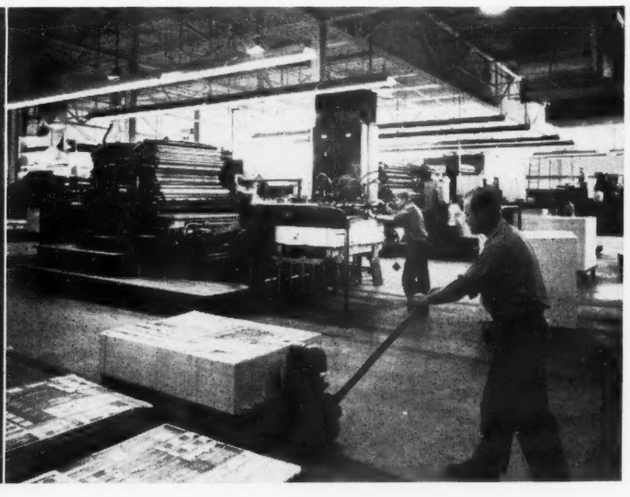
In 1946, M. E. Magnuson, a printing engineer, joined the company and was given the assignment of setting up the new plant. The project was in the planning stage for nearly two years. Three-dimensional models were built to study placement of departments and equipment in order to achieve streamlining of traffic flow. Sketches and designs were made by the dozen, studied, discussed and torn up. The ideas of employees were sought, received and sifted. Many of the innovations and techniques now operative in the San Bruno plant are the outgrowth of suggestions made by Crocker printing craftsmen themselves.

In the final blueprinting, specifications for the new Crocker plant called for a one-story building facing east and west. Dimensions would be 400 ft. long by 300 ft. wide with mezzanine floor for executive offices and balcony space for additional storage area. A color scheme of cool gray and green was chosen for the building and made more attractive by skillful landscaping. Allowance was made for future plant expansion when called for. Cost estimates were approx. $2 million for the building and new equipment.

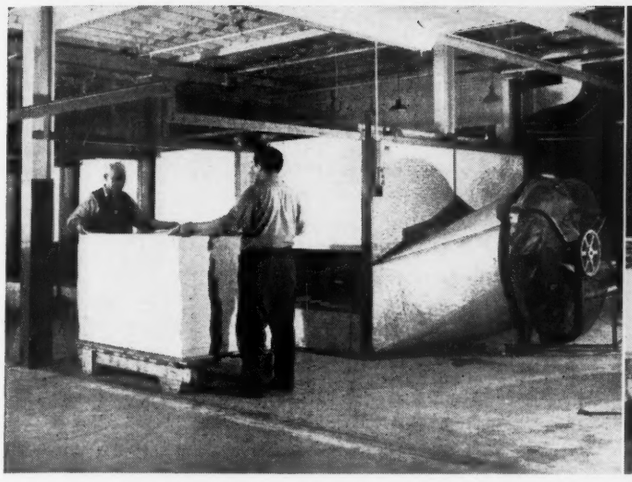
Moving Equipment

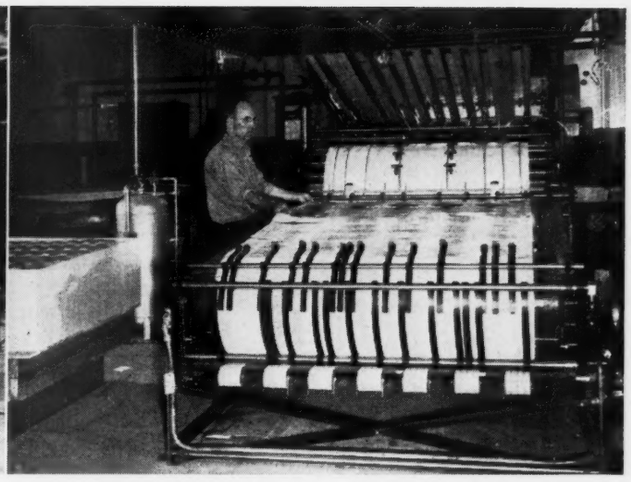
Detailed plans were worked out to move presses and other equipment from the Company's Harrison St. plant to San Bruno. As soon as the new structure was able to house equipment the transfer began. Work was scheduled so that no customer experienced delivery delay. A new press of every type was first installed

Platemakers at the new H. S. Crocker Co., Inc., offset plant are protected from noxious fumes rising from the acid etch bath by a suction system built into the sink. At the left is shown such a bath in which the exhaust pipes are partly visible beneath the tank.



The two-color Harris offset presses in the right hand picture are individually mounted on their own concrete bases to prevent vibration. These bases are constructed independently from the rest of the floor. Fork lift trucks and skids are used for hauling operations.





The photo at left shows a paper conditioner at the San Bruno, Calif. offset plant of H. S. Crocker Co., Inc. This machine is used for artificially conditioning and seasoning paper upon receipt and before it is sent to the pressroom. One of the two varnishers and driers at the Crocker plant is pictured at the right. Each unit is 120 ft. in length and contains 50 ft. of drying oven. These machines are used in the firm's production of labels.

at San Bruno. When these were in operation, the counterpart press in San Francisco was dismantled and re-assembled in the new plant. The same procedure applied in the camera, platemaking and cutting departments.

A first time visitor enters the plant through the sound-proofed lobby, with its north wall partially built of old lithographer's stones—all Crocker jobs of 50 or so years past. A tour through the executive offices brings you to the cafeteria where hot meals are served for all plant employees.

Offset Presses and Varnishers

To the right of the cafeteria on the mezzanine balcony, near the south wall of the building, are 3 two-color, 1 four-color and 4 single-color offset presses. Just beyond the offset presses are two new varnishers and driers, each 120 ft. long with 50 ft. of drying ovens.

Shipping Facilities

Along the south wall, and reached directly by doors from the floor level, is the 350 ft. length of concrete loading platform. Here trucks may back up and discharge or load shipments directly into the plant. A railroad spur track runs alongside, while San Francisco's airport is less than a mile east of the plant.

Beyond the presses toward the rear of the plant, is the label storage department with 24000 sq. ft. of available shelf and floor space. Adjacent are the cutting, bindery and assembly departments. In the extreme northeast corner is the roll stock storage.

"Jumping Jacks"

Immediately in front of the roll stock storage department is a battery of "jumping jacks". These are automatic web presses which can turn out labels die cut, perforated or re-wound, printed four colors on one side and one color on the back, in one operation.

Offset and Letterpress

Extending along the north wall and into the center of the floor area, are the presses of the commercial department. These include 3 offset presses, 2 two-color cylinder presses, a one-color cylinder press, 2 horizontal presses, 4 vertical presses, 1 Heidelberg, 1 Kluge and 2 platen presses. The printing presses are mounted individually—each on its own concrete base, separated from the rest of the floor, to eliminate vibration.

The composing room is positioned to the left of, and next to, the commercial department. Immediately below the mezzanine balcony is the film assembly department. Underneath the overhanging mezzanine are the camera rooms, the photocomposing and platemaking departments.

Platemaking Equipment

In the dot etching and art departments every artist and color corrector has his own studio with north light window, driers and sink. The camera rooms with their two 30 in. Directoplates and 44 in. overhead Monotype cameras are soundproof and vibration-proof.

Film storage is handy to etching, photo and plate handling rooms. The photocomposing room is temperature and humidity controlled to a variation of less than 2 deg. Two photocomposing machines are controlled from a central vacuum. Acid fumes from the etching sinks are drawn downwardly, and out by means of a vacuum suction from below.

Press Waste Exhaust

Another interesting use of vacuum suction is to be found in the web press department. Over each of the presses is a 6 in. diameter pipe. Instead of being allowed to pile up on the floor, then carried out, waste cuttings from the presses are fed into these pipes and carried by vacuum outside the plant for disposal. In fact, muscular transport is kept at a minimum throughout the plant. Necessary lifting and hauling operations are done mechanically by fork lift trucks. Hydraulic hoists are placed where there is a standing need.

Departments are inter-related so that operations dovetail with no lost motion or time. Every job, no matter what kind, has a straight line route to follow. Paper is stored handy to the production of every type of job.

The entire building is air conditioned to the extent of having a continuous flow of controlled and filtered air. In addition to daylight, ample light on the job is provided for by fluorescent, incandescent and mercury vapor lights.

Lighting Facilities

A great deal of study was devoted to getting the right type of light in the right place. For instance, color work demands a type of lighting closely approximating daylight but unvarying in intensity at all times. Crocker technicians, together with lighting engineers, evolved a combination of fluorescent and incandescent illumination. This so closely simulates natural light that colors can be mixed and truly evaluated during the printing process at any time.

Other types of illumination formulas were worked out for various departments. The composing room and label cutting department called for a shadowless, even light which was achieved by a combination of incandescent and mercury vapor lamps.

Jumping Pressroom Cost

(Abstracted from address by B. F. Garrity, Production Manager, Gannett Newspapers, before PNPA Mechanical Conference, Harrisburg, Pa., April 1949.)

THERE is considerable extra cost in a great many pressrooms due to the fact that papers change in size so rapidly. This trouble, of course, begins in the Advertising Department. Too often the people in this department do not seem to realize that by jumping two pages for a comparatively small advertisement they increase the number of men in the Pressroom by two or three extras, who, a great many times, are working at overtime rates. Sometimes it even increases the number of men in the Mailing Room.

Moving Day *carried out cooperatively in plant of St. Paul (Minn.)* Pioneer Press *and* Dispatch — *New equipment installation with remodeling of old accomplished successfully without missing schedules*

By HORACE ANNIS

THE St. Paul (Minn.) *Pioneer Press* and *Dispatch* management, ever since acquisition of the paper by the Ridder interests, has operated on the premise that money spent for improved production methods was economical spending. In line with this policy, it was decided several years ago that a considerable outlay should be undertaken for physical expansion, new machinery and rearrangement of the plant. Motivating this decision were increasing production demands caused by heavy advertising and circulation loads and the desire to produce a better product with economy of operation. A big factor in the contemplated changes was the desire to print run of paper three colors and black.

Constructing First Unit

First step in the program was construction of the first unit of a new building, 72 ft. by 100 ft., at Fourth and Minnesota, facing Minnesota and adjacent to the old mechanical department annex which houses the pressroom and stereotype department and is across Fourth Street from the main building. The two buildings are connected by a tunnel.

Mechanical Dept. Facilities

The new structure, embodying one to four levels was begun in the fall of 1947 and equipment began to move into it last April. In it were provided 16,800 additional sq. ft. of floor space for mechanical departments and temporary garage facilities. It made possible more than doubling of the previous mailing room space; a new stereotype room of approx. 3000 sq. ft.; 1000 sq. ft. of maintenance machine shop space; additional newsprint storage sufficient for 150 T.; a room for the paper's civically active drum and bugle corps; a spacious, modern loading dock and a separate building for street sale newsboys so that it is not necessary for them to enter the plant for their papers.

In addition to the present new structure, costing in excess of $250,000, it is also planned at some later date to build on the front of the same lot, across the street from the main building, a six-story structure, 75 ft. by 100 ft., to house an auditorium, radio studios and some departments of the publication.

With the space provided, the actual expansion and reorganization of the mechanical departments began — big changes that might have disrupted production until they were finished. But there was no disruption. Papers rolled out on deadline; mail editions met the trains as usual; truck schedules were maintained and carrier boys delivered their papers to homes at the usual hour. This was done with only one press in operation at times and while stereotype and mailing room equipment was being moved about. The single press handled as high as 96 pages of black and white on a run.

Inserting Machines Rebuilt

One of the most important jobs in the program of more efficient production was rebuilding of mailing room inserting machines with pneumatic heads. Necessity here was the mother of invention for not only were the needle machine (Halversons) unsatisfactory in performance, but it became impossible to get replacement needles for those broken by heavy loads.

The rebuilding job was done on a strictly local basis. Drawings for the pneumatic head castings were made in the *Pioneer Press* and *Dispatch* mechanical department and the castings were made locally. Two of the heads were built completely in the plant and the mailing room now has five machines with five heads to take the place of the previous set-up of three machines with five heads and two with four heads.

Wallastar Bundler

In the mailing room "face lifting" to increase capacity, a new Wallastar electric-weld bundle tying machine has been added. This machine has a capacity of 20 ties per min., ties so secure that a bundle could be dropped from a considerable height and the weld would not part. Control is so precise that, should the machine fail to make a tie, (a thing that happens infrequently) it can be stopped instantly and the bundle retrieved for tying. To those unfamiliar with this machine, some of its details may be interesting. The length of the wire used in the tie is automatically adjusted to the size of the bundle by means of a plunger operating under 90 lbs. of air pressure. This plunger, moving downward, compresses the papers and the larger the bundle and the shorter the stroke of the plunger, the greater the length of wire released. Incidentally, the weld saves about 6 in. of wire per tie over the old twist tie method. Even tension is maintained at all times so that the wire does not cut through bundle wrappers and there are no loose bundles.

Four Spiral Chutes

Originally, the mailing room had only one chute to the loading dock. It now has four spiral chutes, fed from a conveyor belt traveling in front of the tying machines. Direction of conveyor travel can be reversed so that any chute or set of chutes can be fed from tying machines at either side of the room. A diverter gate set in the chute entrance automatically guides the bundles of papers into the proper chute, thus eliminating much hand labor.

Aluminum Top Tables

Conveyor work tables have been converted from wood top to aluminum top, facilitating movement of bundles to tying machine conveyors. This is only one of the many changes effected to make the

(Continued on Page 108)

Moving Day Together with New Equipment Installation was Quite a Chore in Plant of St. Paul (Minn.) *Pioneer Press* and *Dispatch*

1.—This is how the job looked after the press was moved to make space for new Wood color printing units.

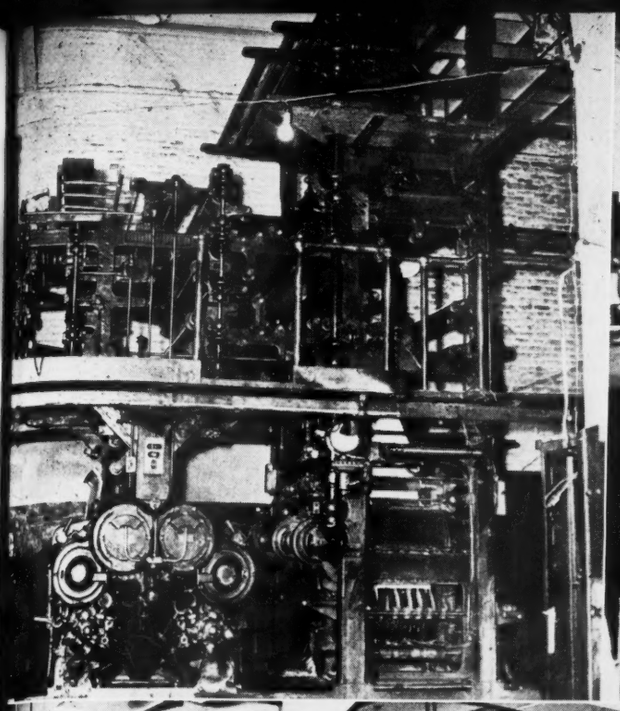
2.—Forty-two T. of machinery (press unit and folder and superstructure) were moved back 25 ft. in one operation in 10 hrs. with Norton 35 T. jacks. Note rollers underneath press frame.

3.—This Wood automatic stereotype curved plate shaver is the pride of the Stereotype Dept. Looking it over are (left) Max Kuppers, head machinist, who supervised installation of the new machinery, and Lawrence Kameron, stereotype foreman.

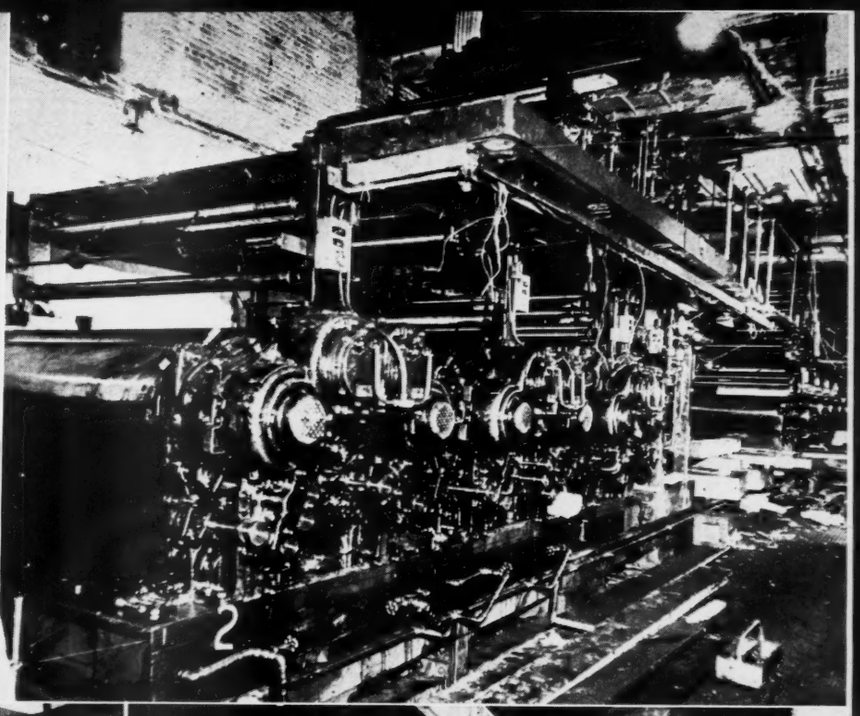
4.—Not only was the Stereotype Dept. enlarged but much modern machinery was installed. At left foreground is the new color pot and casting box. In background is the new 10 T. Kemp-fired pot and Automatic Autoplate.

5.—Sanitary facilities for the workers was a must in the new annex building. Here is a section of the locker room. Looks pretty good, huh?

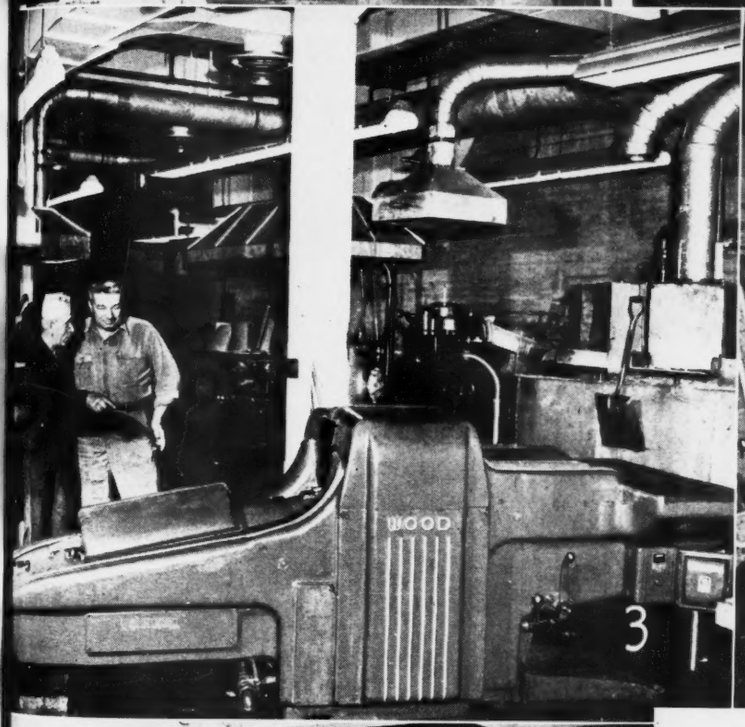
6.—View of the St. Paul (Minn.) *Pioneer Press* and *Dispatch's* new mechanical department annex building ranging from one to four floor levels; cost in excess of $250 thousand.



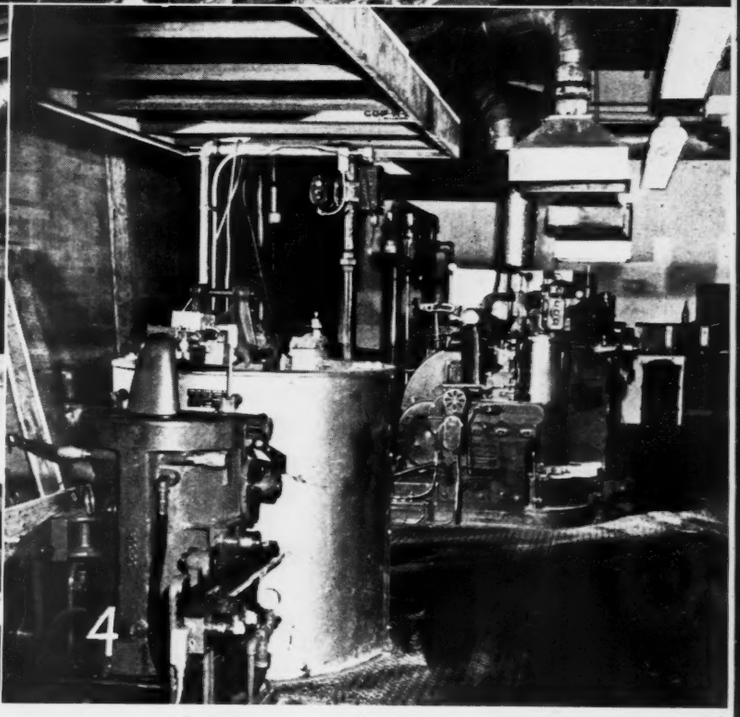
1



2

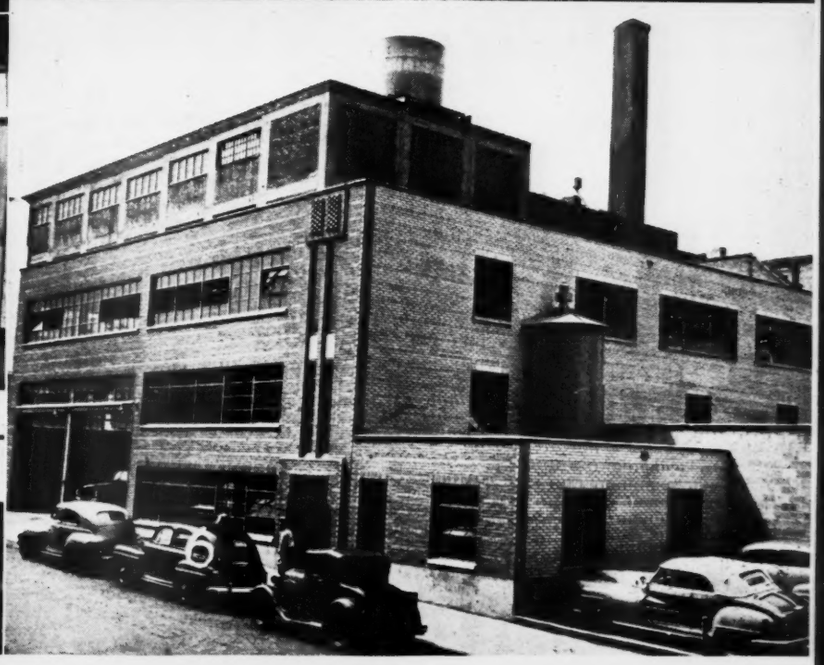


3



4

5

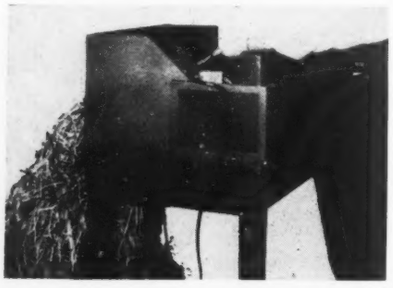


6

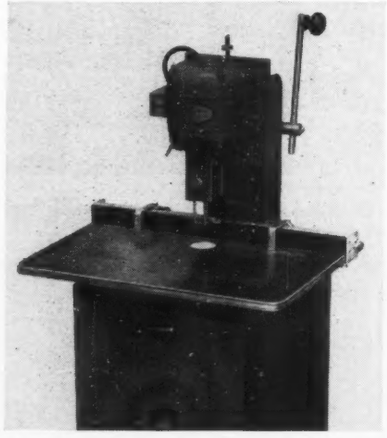
EQUIPMENT & SUPPLIES

Paper Shredding Machine

THE Shreadmaster Corporation has announced a table model shredding machine for converting waste paper into unrecognizable shreads to be used as packing material. Manufacturer states the paper shreads produced are dustless, uniform in width and are used for protecting perishable or breakable goods during shipment. The shredder is pro-



vided with a 14 in. throat, safety devices, and a 1 h.p. reversing motor which will operate from any electrical outlet. The paper is shredded lengthwise with the feed into 1/16 in. widths and any desired multiples, at capacities up to 600 lbs. per hour. Machine shreds paper by rotary shearing action. The table model can be used to shred sheets, rolls, small pieces, crumbled waste, newspaper, wax paper, tissue paper, pass books, cards, labels, tickets, transfers, premium packages and a variety of non-paper materials, including foil and cellophane. Further details may be obtained by addressing your request to *Printing Equipment Engineer.*



Bench or Floor Model Paper Driller—The Pioneer-Toledo Corp., has announced a paper driller in either a floor or bench model. Pedestal of floor model is 16 in. by 18 in. by 32 in. Equipped with tool drawer and four clamps for mounting and demounting the driller. Available with either 110 v. or 220 v. motors. Write *Printing Equipment Engineer* for further information.

Day-Glo Inks

JUST recently, the use of Day-Glo Fluorescent Silk Screen Process inks has been promoted for outdoor traveling displays such as are used on cars, trucks and busses, by Switzer Bros., Inc., in Cleveland. The inks are characterized by outstanding visibility and what has been termed "superlative luminosity and fluorescent qualities" for outdoor advertising use, particularly as bus and car card advertisements.

The designs printed from these inks appear to best advantage when surrounded by a dull black conventional-ink background to provide maximum contrast at the greatest distance, or to put it another way, for maximum eye penetration at short distances.

Up to the present time five basic colors have been developed: Neon red, Fire orange, Arc yellow, Saturn yellow, and Dark Signal green. At the moment, these inks can only be used in the silk screen process. A heavy enough coating cannot be laid down either by letterpress or offset to secure penetrating brilliance.

The inks glow in natural daylight. They will glow at night in the presence of ultra-violet light. Visibility of the colors is especially effective on cloudy days or in the evening, because of the presence of ultra-violet light rays.

The inks are intended for what may be called temporary use. The display life of Neon Red and the Fire Orange colors approximates 30 days outdoors without fading. The other colors, however, do not have the same stability, their outdoor life in the summer-time being about 13 days. In the summer direct sunlight, the colors last one day, whereas in December they may endure 15 days.

To secure maximum fluorescence, the colors should be applied heavily such as can be done by the silk screen process; they should be applied only on a white surface. The images should be surrounded by a dense black background. The colors can be applied to any surface by silk screen methods.

It has been announced by Switzer Bros. that Day-Glo inks will be available later for paints and textiles. The problem at the present time is to provide a pigmented ink which can be applied heavily enough by the printing processes to make them equally effective as when applied by silk screen. The solution, however, may be found in the development of a dusting process such as is commonly employed for bronzing metallic powders.

High-Intensity Stroboscope

DESIGNED for stroboscopic observations on machinery operating at relatively low speeds, such as printing presses, is the Strobolume announced by the General Radio Co. The Strobolume is a high-intensity, short-flash

The Strobolume, a high-intensity, short-flash stroboscope, announced recently by the General Radio Co.

stroboscope which the manufacturer claims will produce a definite stationary image of the moving object on the retina of the instrument's eye.

The instrument, states the sponsor, will operate continuously at speeds up to about 45 flashes per min. Operations for increasingly shorter periods are possible up to 1200 flashes per min.

Dimensions of the metal case are 13 in. by 7½ in. by 11 in. and net weight is 18½ lbs. Equipped with a 10 ft. cable for connection to power supply. Further information may be obtained by sending your request to *Printing Equipment Engineer.*

Paper Roll Handler — A paper roll handling attachment for use on Skylift electric fork trucks, announced by Automatic Transportation Co. Unit revolves through 360 deg., handles rolls up to 60 in. long, and if properly balanced, up to 78 in. long. Roll handler and standard forks are interchangeable on this truck model. Further information may be obtained by writing *Printing Equipment Engineer.*

Small Parts Cabinet

DESIGNED for storing small parts are two models of a steel drawer cabinet announced by Equipto, Div. of Aurora Equipto Co. Drawers have adjustable cross dividers on 1 in.

Equipto, Div. of Aurora Equipto Co. announces two models of steel drawer cabinets for storing small parts.

centers. Lengthwise dividers may be added or removed. Furnished with label holders and dividers.

Equipto No. 11 has 18 drawers, each with 3 cross dividers, providing 72 adjustable compartments.

Additional information may be obtained by addressing your request to *Printing Equipment Engineer*.

Portable Automatic Sprinkler

A PORTABLE automatic sprinkler system for extinguishing fires has been announced in an Underwriters Laboratories listing as manufactured by Stop-Fire, Inc. Constructed of silver welded heavy brass, the sprinkler

unit is installed by suspension from any point. Heat waves cause sprinkler head to discharge under pressure a spray of combined carbon dioxide and Chlorobromomethane. Manufacturer states it is equally efficient on oil, grease, flammable liquid, lacquer, paint, solvent, or electrical fires. Approx. height is 12 in. and minimum specification capacity, 700 cu. ft. Further information may be obtained by addressing your request to Stop-Fire, Inc., in care of *Printing Equipment Engineer*.

Lineal Tachometer

A LINEAL tachometer, which is universally applicable and can be moved from one point to another, has been announced by the Durant Mfg. Co. The instrument can be mounted by placing the rubber faced wheels on the moving material at the point desired. It is fastened to the table or the frame of the machine by a bracket.

The Model 1646 tachometer is so designed that the head can be rotated through 360 deg. to provide for reading

The Productimeter Lineal Tachometer, Model 1646, manufactured by the Durant Mfg. Co.

from any position. The bracket and swivel hinge allow for vertical and horizontal positioning of the instrument. It is available in standard units with dial ranges of 20 yds. to 200 yds. per min. and 60 ft. to 600 ft. per min. Sponsor states other ranges can be manufactured to order.

Additional information may be obtained by addressing your request to *Printing Equipment Engineer*.

Steel Rule Die Booklet

FULL size plans for die-cut booklets, folders, novelties, etc., are contained in a booklet entitled *A Barrel-Full of Money Making Ideas for Printers* recently issued by Accurate Steel Rule Die Mfrs. The booklet, measuring 11½ in. by 15 in., is cleverly die cut and printed with a brown cover to depict a barrel. The 24 pages contain over 100 different patterns of steel rule dies. Copies may be obtained by writing *Printing Equipment Engineer*.

Barrel Racker

A DEVICE called the Wizard Barrel Racker, which enables one man to place a barrel from upright position to a position where its liquid contents can be drained into cans or buckets, has been

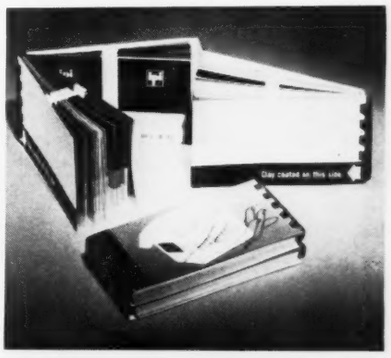
Wizard Barrel Racker for manipulating a barrel into horizontal position for draining, announced by Modern Equipment Co.

announced by the Modern Equipment Co. Frame is made of structural steel, electrically welded.

Device is movable by means of four rubber or metal wheels. *Printing Equipment Engineer* will gladly furnish additional information upon request.

Elevator-Crane Bulletin

RECENTLY released by Barrett-Cravens Co. is a bulletin on elevators and portable cranes. The 36-page bulletin is profusely illustrated with the various models manufactured by the company. Information and specifications are included. Printed in red and black, it measures 8½ in. by 10¾ in. Copies may be obtained by writing *Printing Equipment Engineer*.



Color Harmony Manual—The Color Standards Dept. of Container Corp. of America has announced an enlarged and improved third edition of the Color Harmony Manual. The 16½ in. by 8¾ in., maroon leather, loose-leaf binder manual is a presentation of the Ostwald system, and contains 37 charts and 943 different color chips. Each manual includes a hue circle chart, an adjustable gray scale, and an explanatory and illustrative text. Cards for the binder measure 6⅞ in. by 8¾ in. Further information may be obtained by writing *Printing Equipment Engineer*.

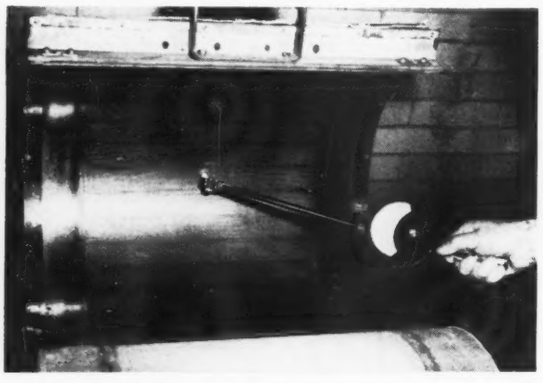
Testing Surface Temperatures

THE Alnor Pyrocon can be used for measuring surface temperatures of stereotype formers, scorchers, casting boxes, and Intertype and Linotype machine pot crucible mouthpieces. It is manufactured by Illinois Testing Laboratories, Inc.

Surface heats of stereotype formers and scorchers can be determined with the Pyrocon, through the instrument the covers and bases of all formers and scorchers can be set uniformly. Burned-out electric units or elements of spot-heating scorchers can be discovered with this instrument.

The Pyrocon can also be used for testing temperatures of stereotype casting boxes and spouts of Autoplates and Automatics. By means of an immersion attachment the temperature of metal in all types of automatically controlled metal pots can be closely checked.

A variety of interchangeable thermocouples is available for different applications. For additional information, write *Printing Equipment Engineer*.



Alnor Pyrocon testing temperature of a Sta-hi Mat Former Cover in Stereotype Dept. of Cleveland *Press*.

Rotogravure Manual

THE Champlain Co., manufacturers of printing presses and allied equipment, is offering a comprehensive instruction manual on commercial rotogravure printing and Champlain Rotogravure Presses. Titled *Gravure*, the booklet was prepared by the Technical Trade School of the International Printing Pressmen and Assistants' Union of North America at Pressmen's Home, Tenn., where it is used as a textbook. An important contribution to the printing industry, it is one of the few publications of its kind dealing specifically with rotogravure. Using Champlain equipment for illustrative purposes, the author describes the printing processes, preparation of equipment for operation, printing by rotogravure, and maintenance of equipment. Illustrations include Champlain multi-color units, control and fabricating equipment. Copies may be obtained by writing to the Champlain Company direct or through *Printing Equipment Engineer*.

Gravure Cylinder Diameter Booklet

AMERICAN Type Founders, through its Klingrose Gravure Div., has prepared and is offering pocket-size 12-page-and-cover booklet whereby gravure layout men can ascertain instantly, without calculation, the exact cylinder diameter for any known circumference.

In commercial gravure printing, the "length of print" is the starting point for all cylinder calculations. This, plus any allowances for sheeting, electric eye cut-off, etc., establishes the necessary cylinder circumference. From this figure, the cylinder diameter can be determined. But not on the usual basis of dividing by pi (3.14159). Other considerations have to be included in the calculation, and the layout men often have difficulty in ascertaining the exact diameters to build up their cylinders to, for various jobs.

ATF's new *Cylinder Calculator* booklet, therefore, will be time saver to the gravure printer. To use the booklet, he locates the cylinder circumference he has found he will need (from 1 in. to 60 7/8 in., graduated by 1/8 in.), and he can instantly read off the corresponding diameter, already calculated to the third decimal. For circumferences with finer inch divisions than 1/8 in., simple instructions are given for ascertaining the diameter for the final 1/16 in. 1/32 in., or 1/64 in.

Copies of the *ATF Cylinder Calculator* may be obtained by interested gravure printers, without charge, by a request on their company letterhead to American Type Founders, Klingrose Gravure Div., 200 Elmora Ave., Elizabeth B, N. J.

Tally-Tab Machine

ANNOUNCEMENT has been made by the Miller Lauffer Printing Equipment Corp. of an automatic printed sheet counter and marker. Designed to operate on any size letterpress or offset press, the machine is located on a pedestal at the delivery end of the press. It is a portable unit, weighing 25 lbs., and can be moved from one press to another when desired. The Tally-Tab, states the sponsor, is synchronized with the press by means of a special counter.

Manufacturer claims the machine automatically counts units of 50, 100 or 500 sheets (as desired) and inserts a marker tab directly into the pile. The markers are stiff bristol stock and extend from the pile about 1 1/2 in. Additional information may be obtained from *Printing Equipment Engineer*.

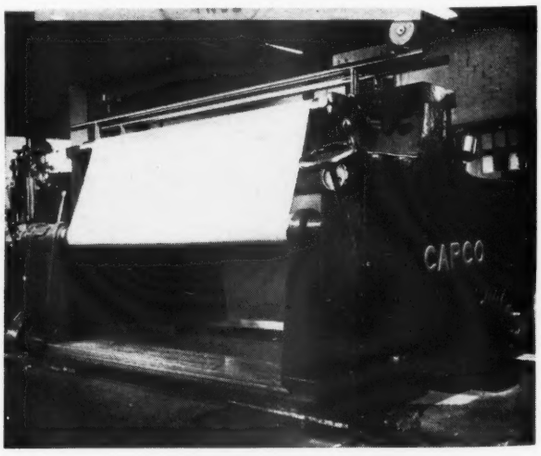
Improved CAPCO Rewinder

CAPITAL Tool and Mfg. Co. has announced an improved rewinder for unwinding or rewinding rolls of paper. The rewinder is provided with a slitting arrangement for rewinding damaged paper rolls. Sponsor states that damaged full size paper rolls can be cut to three-quarter size by the slitter and rewound. Three-quarter size rolls can be cut to one-half. The center of the input and output rolls are positioned close to the floor to minimize lifting and lowering. A switch on the machine can be used to reverse the rewound roll in the event the damaged paper runs over the top.

The machine is supplied with a splicing car which trims and overlaps top and bottom sheets to be pasted in one operation. This feature also lays the adhesive tape in place for this operation.

Another feature is an automatic tension floating roller which the manufacturer claims allows the roll to be wound with even tension regardless of the size of the roll. The compensating roll adjustment takes up the slack on either side of the sheet.

Specifications are: max. paper width, 66 1/2 in.; length of machine 8 ft., 8 in., width, 5 ft., 8 in. and heighth 4 ft. 1 1/2 in. Additional information may be obtained from *Printing Equipment Engineer*.



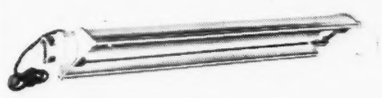
Improved CAPCO Rewinder manufactured by Capital Tool & Mfg. Co. for unwinding or rewinding rolls of paper.

Rogers Price List

THE Samuel C. Rogers & Co. has released for distribution to the trade its latest illustrated price list. In the eight pages of the price list are included the Rogers line of knife and face grinders, saw sharpeners and accessories with index, capacities, illustrations and prices of each model size. Page size is 8½ in. by 11 in. printed on buff colored paper. Copies may be obtained by writing *Printing Equipment Engineer*.

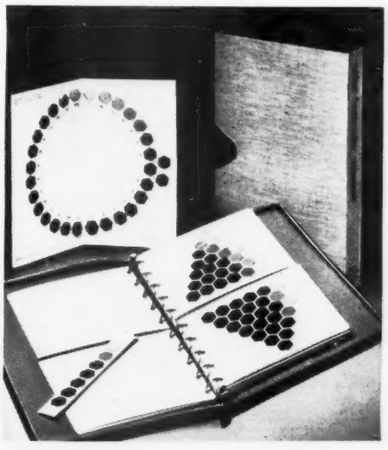
Parabolic Glo Heater

DESIGNED for the drying of inks, glues, etc., is the electric model reflector-type Parabolic Glo Heater recently announced by Herbert Products Inc. Electric heating elements of cylindrical shape having a high watt



Herbert Products Inc., has announced an electric model reflector type heating unit for drying of inks, glue, etc.

density are employed. Heat from the infra-red band is delivered by these units. Manufacturer claims the design permits rapid heating and cooling of the elements. Heaters are available with thermostatic control for maintaining predetermined temperatures. Desired temperatures can be made on a calibrated scale. Further information may be obtained by addressing your request to *Printing Equipment Engineer*.



IPI Color Guide for Boxboard—A Color Guide for Boxboard showing 40 colors on both clay coated and patent coated board has been prepared by International Printing Ink. The pocket size guide also contains information and suggestions for package printers. Included is a check list for packaging ink and an explanation of color measurement and control. Requests for copies may be made to ***Printing Equipment Engineer***.

Carton Sealing Adhesive

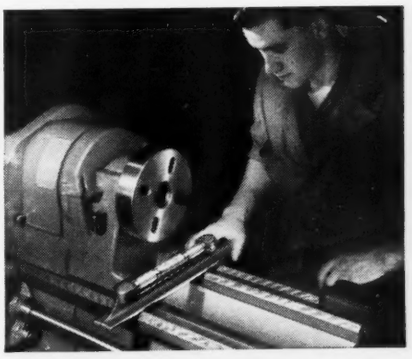
CARTONTITE is a carton sealing adhesive recently announced by Paisley Products, Inc., for use with various carton sealing equipment. The fluid brown adhesive is prepared from a converted dextrine base, weighs 10 lbs. to the gallon and can be used as received or diluted approx. 10 per cent with water, if desired. Manufacturer claims it is odorless, non-toxic and can be used cold, requiring no heat on the glue pans. For fastest sealing it is used full strength, states the sponsor, having sufficient fluidity to flow through pumping systems, from floor reservoir to machine gum pot and return. *Printing Equipment Engineer* will gladly furnish additional information to anyone interested.

Magenta Masking Method

EASTMAN Kodak Co. has released a booklet entitled the *Kodak Magenta Masking Method of Color Reproduction*. In the booklet is described the theory of this method of masking, the method, materials and equipment used. Also described is procedure, the making of color separation negatives, techniques of masking color transparencies, etc. Technical data on such subjects as the effect of lens flare on masking and color correction, and the determination of mask percentages, is contained among the 18 pages. Free copies may be obtained by writing Sales Service Div., Eastman Kodak Co., Rochester 4, N. Y.

12 in. Precision Level

SOUTH Bend Lathe Works has announced a 12 in. precision level designed for leveling machine tools. The level has a ground and graduated vial mounted in a 12 in. cast iron frame.



Machinists' 12 in. Precision Level announced by South Bend Lathe Works for the leveling of machine tools.

The vial is protected from accidental breakage by an aluminum alloy cylinder which may be revolved to enclose the vial. Base of the instrument is precision ground on all useful surfaces including the V-way for leveling shafts. Further information may be obtained by addressing your request to *Printing Equipment Engineer*.

Halftone Screen Counter

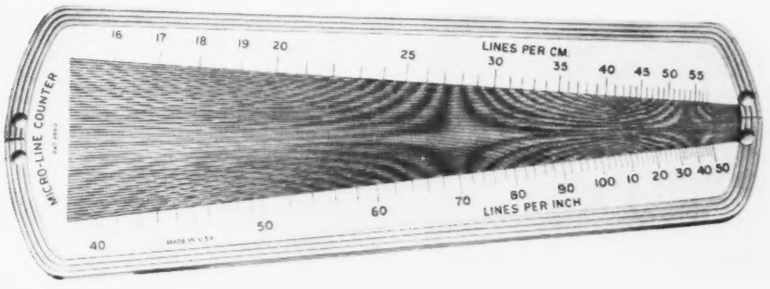
AN instrument called the Micro-Line Counter that is claimed to accurately determine the number of halftone dots per inch, has been announced by Micro-Lite Company, Inc.

Photo-engraving plants, printers, publishing houses and advertising agencies may use the device for determining Benday and halftone screens, and in measuring the angles on multicolor engravings.

The counter consists of multiple layers of transparent plastic, surrounded by a satin-finish brass or gold-plated metal frame. The instrument is 6¼ in. long and the width tapers from 2¼ in. to 1¾ in. On the field a series of precise, converging lines are engraved and along the sides near the frame are the calibrations showing the number of lines per inch and lines per centimeter.

When the counter is placed on the halftone, the inscribed lines on the device produce a lens sharpened, intense moire pattern against the dots of the underlying halftone. Where the moire lines converge, the exact count of the halftone is read on the scale.

The counter is calibrated from 40 to 150 lines per inch. By multiplying or dividing by 2, readings may be obtained up to 300, and as low as 20. An illustrated folder will be sent upon request to *Printing Equipment Engineer*.



The Micro-Line Halftone Screen Counter is 6¼ in. long; at the wide end it is 2¼ in. across and tapers to 1¾ in. at the narrow end. The Counter is calibrated from 40 to 150 lines per in. In this illustration, the moire pattern in the instrument indicates the screen underneath is 70 lines per in. Reading is taken from the converging lines.

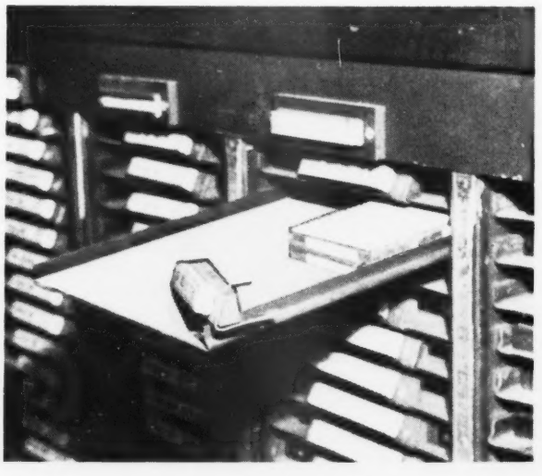
Work Simplification Pays Profits

By Dr. Russell Raymond Voorhees

WORK simplification has been on the program of many a production executive. In fact, most production and mechanical executives give it constant thought. The subject is particularly vital in advertising typographic plants. This story is descriptive of a number of devices used in the Harry Baird Corp. plant, Chicago advertising typographers. George W. Kinnard, who is Superintendent, incidentally, is a graduate of Carnegie Institute of Technology. He is only too aware of the necessity for conserving motion and eliminating unnecessary loss of time by the journeymen employed in his plant in turning out tailor-made composition for stores, advertising agencies and the like. A number of his devices are described and illustrated below.

Storing label slides in plant of Harry Baird Corp.'s plant. Stripped type case with lengthwise partitions and bow springs on angular foot blocks keeps them in order when not in use.

Easy-To-Read Case Markers To read the labels on the lower type cases in a cabinet it is often necessary to stoop. This has been avoided in the shop of the Harry Baird Corp. This firm does considerable hand composition from Monotype-cast and foundry type. Mr. Kinnard developed a type case label that makes it easy to read the label without bending over. The basis of the type case marker is a 6 in. length block of wood cut on the front face at an angle of 45 deg. In other words, the label base resembles a right triangle through its cross section with the lower part of the 45 deg. elevation truncated at 90 deg. with base. The wood base is faced with a 6 in. length flat telescopic (C-shape) curtain rod. This is fastened to the 45 deg. angle face with two wood screws. The printed cardboard label itself is cemented to a ¼ in. by 6 in. length of wood stock. The upper and lower faces of the slide block are slotted on a composing room saw-trimmer the proper depth to permit sliding the label block into the flanges of the flanged curtain rod endwise. Cellophane or celluloid covers are cut to the same size as the label slide and are also slid underneath the flanges of the curtain rod to protect the label from dust and/or dirt. The cellophane can be cleaned easily with a damp cloth. In the plant of the Harry Baird Corp. (advertising typographers) it is sometimes necessary to change type fonts in the cases. **STORING THE LABEL SLIDES**—Since much composition is done in the plant of the Harry Baird Corp. by hand from Monotype and foundry type, a system of providing storage for type case labels is necessary because of the changes in type case content at intermittent intervals. Mr. Kinnard utilizes a blank type case (no partitions) in modified form in which to store the prepared label slides (explained above) in alphabetical order. Spaced 6 in. apart, wood strips extending parallel the length of the blank case are tacked to the bottom board of the case. Extending across each space (the 6 in. width) between the parallel strips and at the left side of the case, is tacked an angular block so the label slides may be placed in position for easy reading. The accompanying illustration really explains the arrangement better than can be described in words. At the right-hand side of the case, a slidable angular block is used to hold the label slides in compact position. To the angular foot block is fastened a flat steel bow spring, the ends of which grip either side of the dividing partition. **GALLEY STORAGE MARKERS**—Following Mr. Kinnard's method for labeling type cases as explained above, the same principle of labeling is used for marking type matter which has been placed in storage on galleys. Fixed to the storage markers instead of the two fastening screws used on the type cases, are two steel extensions or forks which are slid on the end of the galley which is slid onto the letter-board, footend out to the front of the rack. In shops where there are a fairly larger number of storage racks filled with galleys containing live type matter, the identification of the galleys is often a problem. This is especially true since the matter is changed frequently which means a change in identification markers. As has been explained above, the label slides for the galley identification is similar to the slides provided for type case labels. The fastening means, however, is different. The prong-like pieces which hold the label slide bases on the galley are attached to the wood slide as shown in the illustration. The steel pieces are made from 1/16 in. flat steel, approx. ½ in. wide by 6 in. long. The front end of the steel holders is bent at an angle of 45 deg. for a distance of about 1½ in. A hole is drilled in the upper end of the angled bracket and affixed to the label slide base by a screw. The steel fork or bracket is fastened to the base so there is a space between the bottom of the base and the bracket—just enough to bind—when slipped on the end of the galley bottom plate. The labels which are fastened to the wood slides carry the names of companies for whom work is being done, or a numbering system might be used if preferable. In this way, the compositor can locate any galley quickly.



Pending, uncorrected or reuse type matter is stored on galleys and is easily identified by this ingenious galley marker.

To letterpress printers, type high should mean exactly 0.918 in. plus or minus 0.0005 in.

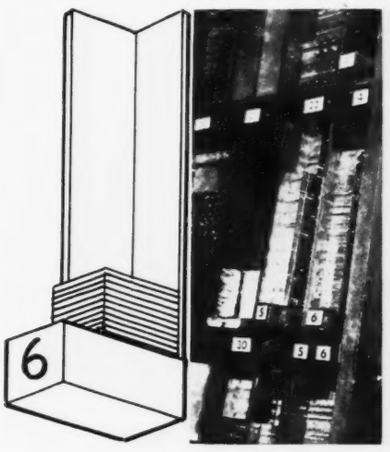
This rotary mitering machine is just about surrounded by inclined shelves for temporary storage of strip-cast material. Work in quantity can be done quickly.

Storage for Rotary Miterer When quantities of mitering are to be done, such as in an advertising typography plant, it's desirable to have lots of galley space right at hand to facilitate the work. In the shop of the Harry Baird Corp., several inclined racks for temporary storage of material are provided for the galleys to accommodate cut or mitered material and also hold the unused material that results from the operation of the mitering machine. This layout makes available a place for a considerable quantity of material to be mitered as well as a place for the finished material in quantity. Best of all, such material is stacked as it is placed in the galleys so that when the mitering or cutting operation is completed it is an easy matter to pick it up and take it to where it is to be used.

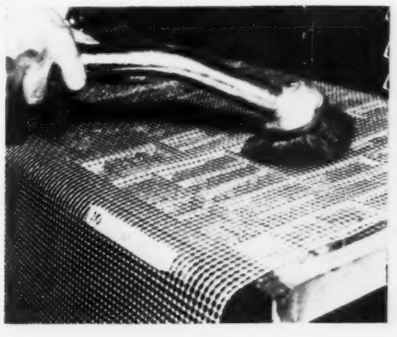
Breakup Bank Saves Time In breaking up forms containing several different faces and sizes of hand-set type considerable time may be lost in going from the breakup to the type cases. The multiple trips are avoided by using a breakup bank in the plant of the Harry Baird Corp. The breakup bank consists of two rows of inclined shelves, each shelf 120 in. by 15 in., three in a row positioned at an angle to each other—like half a hexagon. The inclined shelves are mounted by steel brackets fastened to an imposing table. The form to be broken up is placed in front of the bank and the type lines are sorted and placed according to each family in the respective galley. All of the galleys are labeled according to the type face to be put in the galley under the name plate. When the type matter has been broken up and placed on the galleys according to type face, the different galleys are taken to the cabinets for distribution.

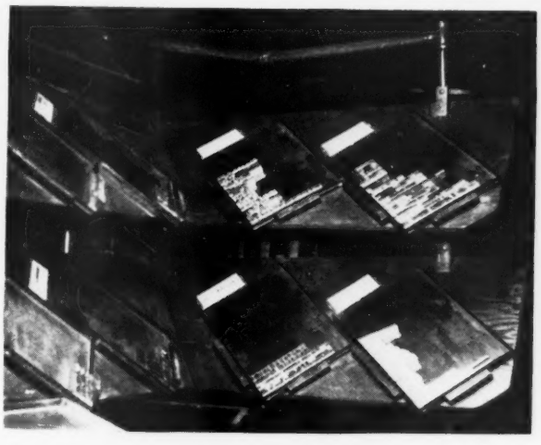
Black Plastic Work Tops In the shop of the Harry Baird Corp., the type cabinet work tops are covered with black sheet plastic $\frac{1}{16}$ in. thick. The plastic provides a harder surface on which to work than the usual wood top. It can be easily kept clean with a damp cloth.

Short Leads in Containers Short lengths of leads are somewhat of a nuisance to handle (hard on the finger nails) when a quantity of them must be taken out of a storage rack to a makeup table where a type form is being made up. In the shop of the Harry Baird Corp., this nuisance has been overcome by Superintendent Kinnard. The lead storage racks in this shop are like those in other composing rooms except with respect to short lengths of leads. The short length leads are stored in removable containers. The bottom part of the containers is fabricated both from wood and bendable steel of the shape shown in the two illustrations. The figure label on the front of the lower part of the container is cemented. The box-like lower part extends outwardly to make handling easier. An L shaped piece of wood forms two sides of the upper section. When short lengths of leads are needed the compositor takes out a section or sections containing the desired lengths to the makeup table. When the makeup is finished, the sections are returned to the storage rack.



Cleaning By Suction Efficient cleaning equipment is an excellent adjunct to the production of better work in any plant. But so often the cleaning of equipment is a hit or miss proposition with no definite means for doing it. George W. Kinnard, Superintendent of the Harry Baird Corp., introduced the vacuum cleaner method in his plant. A vacuum cleaner with a brush nozzle makes short work in cleaning up the usual dry or non-greasy dust and fine bits that always gather on certain equipment, such as saw-trimmers, mitering and composing machines. Type cases, also, gather dust



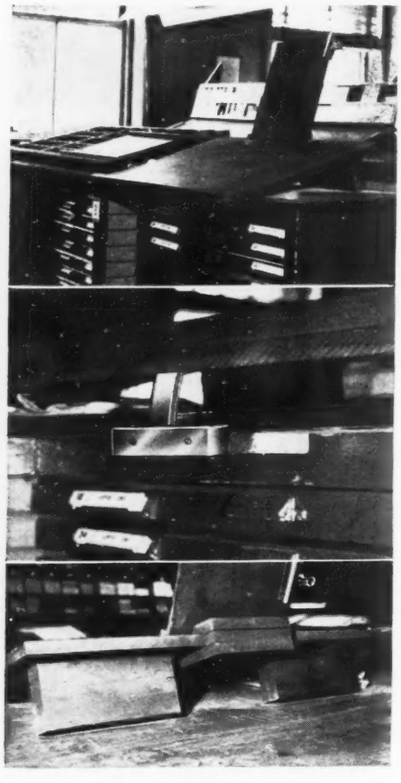


Two-sections of three-elevation hand-set type distributing bank at Harry Baird Corp. plant in Chicago.

and dirt. The cleaning of type cases presents a real problem, since emptying the case to clean it consumes too much time. A blower device just isn't the answer, either. To prevent the lighter types from being lifted into the nozzle by suction, a coarse mesh wire screen is held over the type case. The brush nozzle is then applied to all parts of the screen over the type case. The screen, of course, prevents type from being sucked up into the nozzle. Mr. Kinnard reports the cleaning action as satisfactory and quick.

Hand-Setting Long Takes

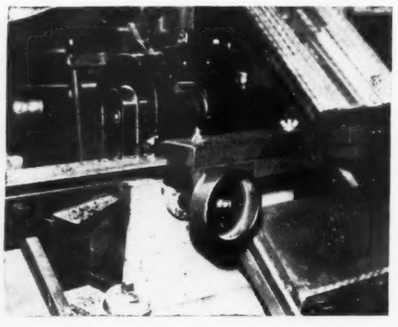
If there is considerable copy to be hand set from one size and face of type it isn't always too comfortable for the compositor to do it with the type case in its regular slide in the cabinet—it might be one of the cases near the floor. To make the work more comfortable, Mr. Kinnard de-



signed a slanting shelf that makes such composition easier on the compositor. The rack consists of two parts, one for holding the type case, and a small board 9½ in. by 11½ in. for holding the copy. The shelf for the type case consists of a board mounted in sloping position with a cleat at the front to hold the type case in place. Blocks at the rear of the board support it in a slanting position. A flat metal tongue screwed to the underside of the shelf and projecting downwardly is inserted in a wood block mounted at top-front surface of the cabinet. Thus it will be seen the rack is removable. The plywood copyboard slants backwardly from vertical position. It is fitted at the bottom with a slotted holder so that it can be slipped on or off the back of the sloping type case shelf. The slotted wood holder by means of which this copyboard is attached to the type case shelf, is so constructed with a flat base so the board may be used to hold copy by simply setting it upright wherever wanted on a level surface. Two standard 3 in. spring clips are provided to hold copy to the board.

Cutting Coupon Rule

Coupon rule (dash rule) used frequently in advertising and other composition, is quickly made in the shop of the Harry Baird Corp., by means of a clamp devised by Mr. Kinnard. The attachment is made of wood in an upper and a lower section. It is mounted over the Rouse rotary mitering machine gauge bed in



front of the cutting wheel. The two sections measure 2½ in. wide, by 7¼ in. deep, by 1¾ in. thick. Two wing nuts are tightened sufficiently to hold the rule frictionwise. The clamp holds the strip cast rule while the cutter mills out a nick in the rule face. The spacing between nicks is accomplished by moving the gauge to the left the desired distance after each cut.

Correct-Amount-of-Ink

GAUGE

CALCULATING the quantity of ink that should be run on a job has always been largely guesswork, although by rubbing a finger lightly over a print of type some pressmen through experience can tell whether too much color is being carried.

Recently, a 90% tone of a halftone plate has found general acceptance as the means of gauging the correct amount of ink. If this particular tone is just fairly well inked, the ink supply is correct. Should this quantity prove too much for the highlights, it indicates that the pressure should be relieved on the lighter tones instead of cutting down the ink supply.

Of course, any ink gauge is largely dependent on the thoroughness of makeready. A good gauge of halftone makeready—and it applies to color process work as well—after makeready and before starting the run is to pull an impression on a sheet of newsprint of good grade such as is generally used in commercial print shops for a good grade of dodgers, this should be fed through the press on top of the sheet of paper to be used on the run. If the highlights print clear and clean, all is well. If heavy in spots, the squeeze should be relieved on the lights; if broken, the squeeze must be increased on the lights. The two gauges given work well for halftone forms.

On a form of type, after good makeready, the finest types in the form constitute a gauge. If they show no tendency at all to "fill" in the bowls and still appear well inked, the ink supply is probably about right.

Necessity for Capital Investments

(From a letter sent by Carlton Mellick, Vice President in Charge of Sales, Miehle Printing Press and Mfg. Co. to sales representatives.)

PRINTING press manufacturers nor printers operating under today's high labor rates and other increased costs can hope to survive, let alone show a fair profit, unless their plants and facilities are brought up to a high plane of efficiency and suitability for the work to be done.

To this end Miehle has expanded over $2½ million since the end of the war. We are now about to spend an additional several hundred thousand dollars in spite of all the talk of depression and recession going around—we have faith in the future. There are thousands of printing presses in service today which are no more capable of efficient production than the machine tools we are about to replace. Below are *our* reasons for replacing certain old machine tools which I believe are analogous to the printers' situation with respect to many presses:

1. Our old machine tools, because of their worn-out condition, will not cut accurately.
   Analogy to the printers' situation: Old worn-out presses will not register or do a quality job.
2. Because of the high wages paid to operators of our old slow machine tools, the cost per unit of production is uneconomically high.
   Analogy to the printers' situation: Considering the extremely high wages paid to pressmen, the production and quality that can be obtained from an old printing press is also uneconomically high. In addition, there is excess in make-ready time, breakdown, delays, etc.
3. It is almost impossible to get operators willing to work on our old machine tools. Experienced operators turn down jobs offered them on these machines, stating they can obtain work elsewhere on modern machines at equally good rates. The work is easier on modern machines and they can earn bonuses.
   Analogy to the printer's situation: The printer must find it equally difficult to obtain good pressmen if his equipment is old and obsolete.

Potpourri Story *about Photo-engraving Dept. of St. Louis* Post-Dispatch—*Quick-change political map—Exhaust system—Solution agitator*

THIS story consists of a mixture of things—all in the photo-engraving department of the St. Louis *Post-Dispatch*. The ideas have been gathered up and have been put into one story because of their value to other plant and photo-engraving executives who may profit thereby. No claim is made that these ideas are exactly new, but *Printing Equipment Engineer* is publishing them for the benefit of those who haven't "got acquainted."

Jig Saw Cut Map of U.S.A. To Follow Political Trends

WITH national politics very much in the public eye, the jig saw cut map made in the Photo-engraving Department of the St. Louis *Post-Dispatch*, will be of great interest to many newspapers. The idea was worked out some years ago when Fred Warmbold was superintendent of that department and Henry A. Kirchmer was his assistant. Mr. Warmbold is now deceased and Mr. Kirchmer is the head of the department. These two got the idea that a jig saw type of cut map could be made so that shifting trends in the field of politics could be shown quickly in the newspaper.

A map of the United States was made with all of the States marked off and their names indicated. Then three zinc plates were made of this map. On one of the plates each state was painted in to print solid black. On the other two zincs Benday patterns were used, dots in one instance and a cross screen in the other.

After etching, the plates were stacked one on top of the other in register. The three etchings were then put in a bench vise and by means of a hand-operated fret saw the different states were cut out of the etchings, care being taken to not destroy the border outline of the U.S.A. This produced three sets of jig saw pieces of the states, one set solid to print black, one set to print a dot pattern, and the third set to print a cross line screen. One of the outside borders was then mounted type high on a solid metal base. A set of 48 envelopes was then made, the name of a state being written on each envelope. Into the proper envelope were put the three zinc etchings of each state.

Superintendent of the Photo-engraving Department Henry A. Kirchmer holds one of the zinc cuts representing the state of Texas. St. Louis *Post-Dispatch* employs this quickly changeable map to indicate changing political trends in a national election of perhaps in a national poll.

To use this map, one set of cuts, those printing solid black, for instance, was designated to indicate a Democratic trend while the dot set was designated to indicate Republican trend, with the cross screen being designated to indicate doubtful—neither Democratic nor Republican.

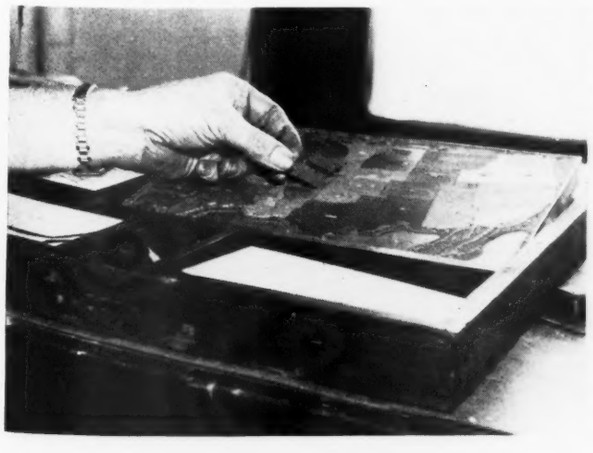
When election returns began to come in, or, often before election when political forecasts were being made and it was indicated that, for instance, Missouri was definitely Democratic, then the zinc etching of the state of Missouri that printed solid black would be taken out of the envelope and put in its proper place in the outline of the United States which had been mounted type high on Stereo base. This was followed through with all of the states until a completed map was made, showing which states were definitely Democratic, which ones were Republican and which were doubtful. A stereotype mat would then be molded from the assembled map, the mat was cast and the cast was made up in a page form.

As changes in trends became known, when doubtful States went either Republican or Democratic, or perhaps a Democratic State shifted to the Republican side, it was an easy matter to lift out the etching of such states, replace each with another etching of the same state but one showing the proper shift. When the map had been completely changed, a new stereo cast was made and put in the form, in place of the previously made cast. It was a matter of a few minutes to make the necessary changes.

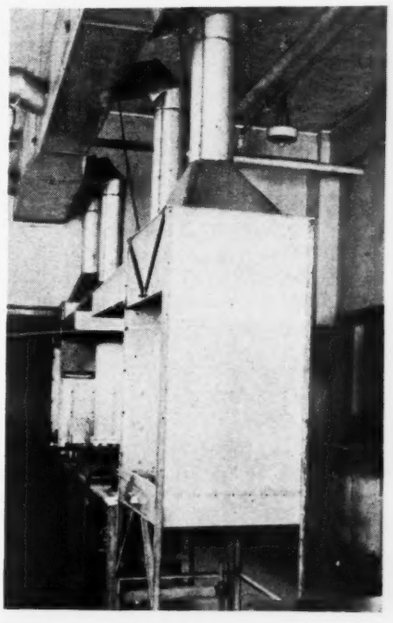
When not in use, a box was made for the whole outfit, which provided a place made to keep the mounted outline cut of the U.S.A. and with other spaces into which the 48 envelopes containing the sets of three zinc etchings of each of the states.

Attractive Features in Etching Department

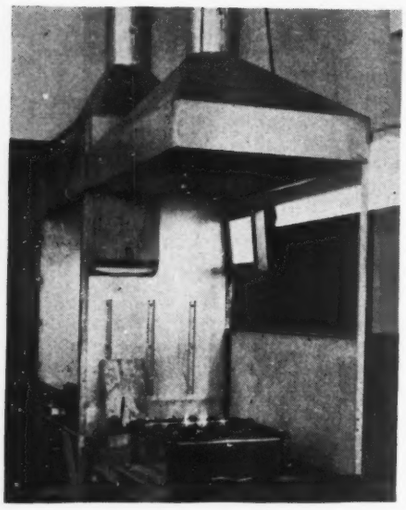
THE etching section of the St. Louis *Post-Dispatch's* photo-engraving department is as modern as will be found in any newspaper plant. It con-



Changing zinc cuts of one of the United States in the assembled map consisting of 48 separable etchings of each state. St. Louis *Post-Dispatch* quickly brings a map up-to-date for latest edition when it is desired to show how voting trends are going in a national election or a poll. Each state is made with three finishes — all black, dotted surface and cross-line screen. When it is desired to change the map because the trends in a number of states have changed, it is a simple matter to go to the page form containing the assembled map, make the changes in states, and then send the form to the stereotype department for casting a new page mat.



Powder boxes in stainless steel housing in photo-engraving department of St. Louis *Post-Dispatch* were made according to specifications of Supt. Henry A. Kirchmer. In upper part of housings there are two spun glass filters. Filters are changed monthly.



Burning-in stove, photo-engraving department, St. Louis *Post-Dispatch*. Overhead is stainless steel hood. An exhaust connection carries away heat and burning-in fumes.

tains a number of attractive features that merit attention of other newspaper plant superintendents. The Photo Engraving Department is under the direction of Superintendent Henry A. Kirchmer assisted by Lorin Newling.

For instance, there are the powder boxes. Each is housed in its own individual stainless steel housing which was custom-made according to specifications. Each such unit is provided with an individual exhaust to keep the powder from reaching the operator and also from getting into the etching room. Suction for these exhausts is provided by a 5 h.p. General Electric motor operating a stainless steel Size 4 Buffalo fan. In the upper part of each of these powder box housings there is installed two spun glass filters, each at a 45 deg. angle. By installing at that angle the suction is distributed equally all over the inside of the box. The filters are changed about once a month. Inside each powder box directly underneath the filters there is fluorescent lighting to furnish the maximum of good working light and at the proper angle.

Over each burning-in stove there is a stainless steel hood made according to specially drawn up specifications. The same exhaust provided for the powder boxes is used for the burning-in stoves thus keeping both fumes and heat from the etching department. Fluorescent lighting is provided outside the burning-in units so that the light is directed on the work.

At the etching machines fluorescent lighting has been installed outside the glass cover so the light is reflected directly on the work being etched. In the etching machine an even temperature of from 70 deg. to 75 deg. is maintained without the use of thermostats.

In this plant, the Roll-up method is used exclusively on halftones. For use with this system, Herman Schenke, zinc etcher, has designed a special rolling-up slab. The slab is designed so that heat of an even temperature is equally distributed all over the slab's surface.

The top of the slab is made of what is known as S24 metal, $\frac{3}{8}$ in. thick. The surface of the slab is scored with lines running at 90 deg. angles spaced about 1½ in. apart. This was done to give greater adhesion of the halftone plate and surface of the slab.

Herman Schenke, zinc etcher in photo-engraving department of St. Louis *Post-Dispatch*, designed a special rolling-up slab for use with Roll-up process. Any one of three fixed temperatures may be maintained in the slab itself.

The rolling-up slab is supplied three different heats, 120 deg., 160 deg. and 212 deg. It is electrically operated without thermostatic control. Just how any one of the three given temperatures is maintained without the aid of thermostatic control is a closely guarded secret. At times, under continuous operation for periods of 16 hours or more, heat at the desired temperature has been maintained. Sam'l Bingham's Son Mfg. Co. furnished a special formula roller for use with this Roll-up slab.

An ink of heavier consistency than is usually used with the Roll-up system is employed.

Remedies Escaping Air

THE suckers on the Harris offset press in the plant of the Rowan Printing Co., Salisbury, N. C., were not working properly. Investigation showed that the air distribution collar had become worn unevenly with the result that the air, instead of going through the holes provided, was escaping.

Clarence V. Roberts, one of the owners of the firm, released the collar that held the two parts of the air distributor collar together. He spread on a little valve grinding compound such as is used to grind automobile engine valves. He then put the two parts of the air distributor collar together again and let the press run a bit to grind down the two faces. This was repeated two or three times and the two parts were then cleaned. When they were put together again and the collar fastened to hold them in place it was found that the two faces had been ground smooth and worked satisfactorily.

Agitator to Mix Chemicals

SOME of the boys in the Photo-engraving Department got tired of shaking bottles of newly - made chemical to get them in solution. William R. Gallaher, stripper and printer, set to work to develop something that would eliminate this tiring labor. He came up with an agitator.

The agitator consists of a $\frac{1}{8}$ h.p. electric motor and a wagon-like cradle in which the bottle is placed. The cradle is pivoted on two uprights as shown in the picture. The device is mounted on a wooden base. The cradle in which the bottle is placed looks very much like a toy wagon with a tongue extending from the front. This tongue is slotted and is counterbalanced at its outer end according to the weight of the bottle and its contents. The toy wagon affair is made to take a gallon glass bottle. The cradle is supplied with a V shaped nick, at the front end into which the bottle neck fits.

The fractional h.p. motor has a speed of 1700 r.p.m. so in order to slow down the motion, three sets of pullies are used to operate the bottle at about 60 shakes per min.

Receives Certificate—H. A. Porter (right), Vice President of Harris-Seybold Co., is shown receiving a Certificate of Appreciation from Lee Augustine, Vice President of The Printing Machinery Co. The award was made in recognition of Mr. Porter's support of volunteer campaign of American printers and lithographers to assist needy fellow workers in Europe. Contributions are still being accepted by the committee. Checks should be mailed to the Printers' and Lithographers' International Relief Committee, P. O. Box 1422, Cincinnati, Ohio.

Goss Press Installed

The Roanoke (Va.) *Times* and *World-News* has installed a six-unit Goss Headliner press in their newly constructed mechanical building. The capacity of the new press, weighing 284 T., is 96 pages and is geared to produce 52,500 newspapers an hour. A double balloon Uni-Flow folder is equipped to deliver 1, 2, 3, 4, 6 or 8 sections.

Absenteeism to Presenteeism

Control of Absenteeism in the Graphic Arts Industries

By DR. W. SCHWEISHEIMER*

**Rye, New York.*

ABSENTEEISM is a problem in printing industry as well as in all other branches of industry. Sick absenteeism is only part of the problem. A large percentage (approx. 60 percent) of total sick leave cases were not ill, according to a study by John M. Stockton[1], but were under a serious disadvantage caused by conditions surrounding their work and personal life. This was forcing them either to take advantage of sick leave regulations (absenteeism) or to sever relation with the company (labor turnover).

It seems that somewhere between 8 and 15 days are lost from work because of ordinary sickness and injury for each day lost because of sickness and injury of occupational origin. Prevention of illness in industry is a concern of both management and labor, and of course of industrial physicians and private practitioners.

Monday Morning Absenteeism

Disorders and disease of the gastro-intestinal tract (stomach and intestines) as a group rank next to diseases of the respiratory organs in severity and frequency. Such complaints occur with increased frequency on Monday. L. C. McGee[2] and J. D. Creger[3] have observed that customs of relaxing over the week-end, including excess in food and alcohol and insufficient sleep, play a prominent role in the causation of Monday morning indigestion or dyspepsia, as they call it.

Holidays have the same undesirable reputation with medical departments of industrial plants. Christmas and New Year in particular are followed by an unusually high level of absenteeism. Knowledge of such connections may well protect the personnel of the printing industry from unnecessary illness and loss of working days.

Dr. F. H. Shillito[4] has reported about similar experiences. In the industrial group supervised by him, stomach troubles too were number two of the non-occupational causes of absenteeism after respiratory diseases. Similarly, Monday was the most frequent day of the week for stomachal upsets.

McGee and Creger state that there is an increasing consciousness on the part of physicians and industrial management alike of the loss in production which results from sickness of industrial workers. And they emphasize that the individual worker can do much to increase his productivity. "Voluntary abstemiousness in food and drink," they say, "a more wholesome use of idle hours and proper respect both for adequate sleep and for the inherent limitations of all human flesh will give men of industry large returns."

Ray E. Hibbs[5] described recently how his company succeeded in reducing absenteeism from a high eight percent to 2.2 percent with the aid of an elaborated program. The men investigated averaged 39 years of age, women 46 years.

Poor Employer-Employee Relations

Mr. Hibbs is of the opinion that the greatest cause of absenteeism and labor turnover is poor employer-employee relations. He tried out in individual cases who was absent, when he was absent, and why he was absent. Then he tried to build up attendance by selling employees on wanting to come to work instead of remaining at home. Involuntary absenteeism was controlled by removing, in so far as expedient, every condition that might give rise to situations which would make it impossible for an employee to report to work. Here are some highlights of his interesting program for controlling absenteeism.

As for health conditions, entrance and periodic physical examinations for all employees was obligatory; well equipped first aid stations, health suggestions through posters, etc.; accident prevention campaign; being certain that company doctor appreciates the importance of keeping workers on the job whenever possible without injury to their health; vacations and rest periods; cafeteria facilities; best possible shift arrangement and elimination of an excessively long work week.

Second point was Transportation and Housing; adjusting shifts to permit maximum use of existing transportation facilities or arranging for proper transportation by use of buses; forming meter-pools and ride-sharing arrangements; assisting employees in finding housing accommodations. As for Personal Problems there was: advising on financial matters, income taxes and legal problems; advising and helping on veteran and draft problems. Fourth part was Morale: proper selection and placement of employees; proper training and job instruction; information regarding the company, safety rules, etc.; proper follow-up to see that each employee is being helped to adapt himself to his new surroundings.

A change in the daily routine, Hibbs pointed out, however slight it may be, may provide enough variety to reduce monotony from an almost unbearable point to one that may be satisfactory or even attractive to the employee. Fatigue originates as often in the mind as it does in the muscles, so it must be treated through the mind. Individual awards for good attendance records are probably the greatest incentives. A high quality of supervision is indispensable.

Role of Foreman

A recent study by E. William Noland[6] has disclosed that while the foreman's role was only one aspect of the overall absenteeism picture in industry, its importance as an aid to any improvement of the situation was obvious. Noland's study concerned 500 workers and extended over several months. Some employees believed the foreman should be an appreciative leader. He and management should mingle with the workers, give encouragement and keep the younger group in line by re-directing their whims when they seemed to take responsibilities lightly. Almost without exception those who saw such an urgent need for improvement in the foreman-worker relationship were in the high absenteeism category.

Other workers emphasized that the foreman should show appreciation for work well done. Eighty-nine percent of the workers in the highest absenteeism bracket (absent more than 10 days a month) felt the foreman never showed much appreciation. On the other hand,

Four Charter Members of the Washington (D.C.) Club of Printing House Craftsmen were presented with Honorary Membership Certificates at the March meeting. Left to right: Lou Thomas, Charles Wood, John J. Deviny (Public Printer of the United States and International Past-President who made the awards, himself a charter member of the Washington Club), George C. Cole, and Ed S. Walker. Lou Thomas and John Deviny were members of the organizing committee at the formation of the International Association. All have served the Washington Club for 25 years.

67 percent of these in low absenteeism categories (absent less than three days a month) found that the foreman always was appreciative of good work. Workers felt the foreman should both listen to and try out suggestions made by them, he should "fit the worker to the job", eliminating shifting of personnel, and should give adequate instruction when the worker is beginning a job.

Noland found that the workers who got on best with those "over them" in the plant had the best absenteeism records and vice versa. The foreman should collect data on absenteeism as a control on irresponsible absence by selling the worker on the need for regular attendance and the fact that he would have to account for his absence.

As for the absenteeism of women, a recent study in England by Wyatt, Medical Research Council London, showed that married women are more often and longer absent from industrial work. Disorders of the respiratory organs and the stomach, functional nerve disorders and the general condition of "fatigue" accounted for most of the absence.

The amount of sickness and the proportion discharged for ill-health were much higher among married than unmarried women. This was most marked in young married women. In general, sickness absense was greatest in women between 30 and 50 years of age. Absenteeism was higher for production workers than for examiners, and least for clerical workers.

---

[1]John M. Stockton, M.D. *Industrial Medicine* 1947.

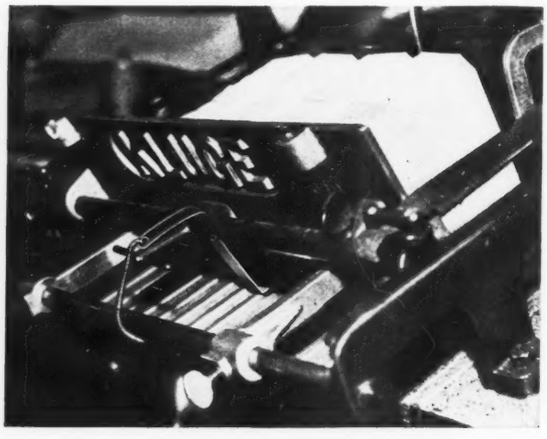
[2]Lemuel Clyde McGee, M.D., Wilmington, Del. Specialist for Industrial Medicine.

[3]James Dean Creger, M.D., Dublin, Va. Specialist for Internal Medicine.

[4]Fred Hopkins Shillito, M.D., New York, N. Y. Specialist for Internal Medicine.

[5]Ray E. Hibbs, Technical Manager, North Star Wollen Mill Co., Minneapolis, Minn.

[6]E. William Noland. Publication in *Personnel Journal*, (New York State), Vol. 24, 1945. Abstract in Digest Neurol. and Psychiat.



Piece of steel band bent to L shape and a length of curtain spring facilitate feeding gang tags and claps envelopes on Kluge press in Birmingham (Ala.) plant of Atlas Printing and Engraving Co.

Device *facilitates running gang tags or clasp envelopes on Kluge*

THE running of tag gangs or clasp envelopes on a Kluge is a problem because the stock when stacked in the magazine does not present itself so that the sucker feet will pick up the stock for feeding. This is caused by the reinforcement of the tag and the clasp on the envelope producing greater bulk at one end of the stock.

The Atlas Printing and Engraving Co., Birmingham, Ala., secure considerable of this sort of work. T. D. Hudson, one of the owners of the firm, worked out a method whereby gang tags and clasp envelopes could be run on a Kluge at regular speed.

The device making this possible is a length of what is known as curtain spring that can be purchased in any hardware store. It is the sort of spring that is often used in homes for the hanging of curtains. A piece of steel band, like is used for binding packing cases, measuring about 8 in. in length is bent in the center to form an L. In one end of the L a hole is drilled large enough to admit the hooked end of the curtain spring. A hole is drilled in the other end of the L and a right-angle lip is bent in the end of the piece after drilling the hole. One end of the curtain spring is fastened to lip of the L-shaped piece.

To install the device on the Kluge, the free end of the curtain spring, a hole in the feeding table from the back. The curtain spring is then pulled through the hole and carried forward over the bottom of the feeding table to the front. It is then passed back to the rear of the feeding table but under. At the back of the feeding table free end of the curtain spring is inserted in the hole in the L-shaped piece of steel band and made secure. This device now provides a length of curtain spring along the bottom of the feeding table.

In loading the feeding table with gang tags, the tags are put into the feeding table with the eyelets uppermost. That puts the unreenforced portions at the bottom where the tags will drop into the curtain spring. The spring coils hold the bottom of the tags slightly apart. The bottom of the tags is in expanded position so that the top and bottom of the stack is about equal in thickness. The sucker feet will pick up the tags just as they do other stock.

In running clasp envelopes the same procedure is followed. The clasp envelopes are placed in the feeding table with the clasp uppermost. The bottom of the envelopes will drop between the coils of the curtain spring as do the gang tags which will separate the less bulky part of the clasp envelopes and allow them to be presented to the sucker feet in such a way that the sucker feet will pick them up and carry them forward for printing.

In Printing Solids

(Abstracted from a report by Floyd C. Larson, of the discussion *How It's Done By Offset*, at the February 1949 meeting of the Chicago Craftsmen's Club.)

IN printing solids on large offset presses, Edward Payne of the Gerlach-Barklow Co., Joliet, Ill., a member of the panel of litho experts, suggested that the image be carried toward the back edge of the plate. On smaller offset presses however, he continued, the solids should be printed up near the gripper edge. Another panel member, Louis Hrabeck of the Sleight Metallic Ink Co., Chicago, in discussing offset ink coverage, said that these inks should cover from 250 to 400 thousand sq. in. per lb. He also stated that offset inks should run 50 per cent further than letterpress inks.

New Warehouse

General Electric will establish an apparatus service shop and warehouse in Richmond, Va. late this summer, according to a recent announcement by H. V. Whitney, Manager of the Richmond apparatus office. The new service shop will be set up to service and repair motors, generators, transformers, control devices, switchgear and other apparatus. The warehousing facilities will stock G-E apparatus products.

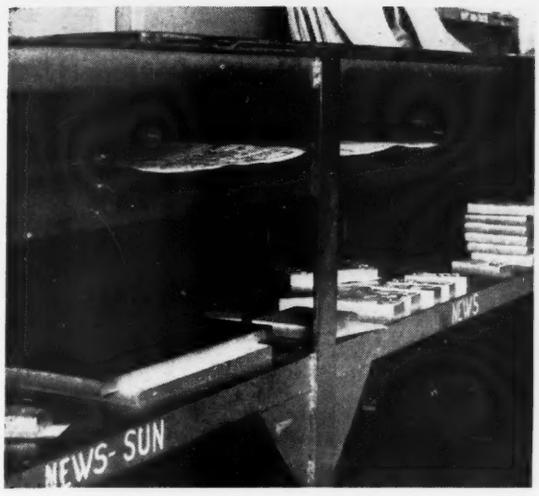


Fig. 1.—View of one of the stereotype cut tables in plant of Springfield (O.) *News* and *Sun*. A ¼ in. mesh wire netting shelf upon which two molded and partially pre-shrunk page stereotype mats can be seen immediately underneath the top surface of the bench.

Drying *high shrinkage stereotype mats executed in three operations for consistent results in Springfield (O.) plant*

HIGH shrinkage stereotype mats provide the means for giving daily newspaper management what it wants—reduction in overall page size. But the high shrinkage stereotype mat also brings with it manipulating problems. The higher the moisture content of mats, the greater amount of time is required for processing to properly rid the mat of moisture.

This increased processing time together with the not uncommon and intermittent bunching of madeup pages from the composing room before press time presented a perplexing problem to Frank Otstot, Stereotype Superintendent of the Springfield (O.) *News* and *Sun*. These two papers are the only ones published daily in Springfield, evening and morning respectively. Usually, in this plant, forms for an edition are sent to the stereotype department during 1 hr. 15 min. time irrespective of the number of pages.

While he couldn't do very much about relieving occasional bunching of page forms, Mr. Otstot changed the mat processing method to secure satisfactory results without running into trouble. The mat shrinkage employed in the stereotype department is ¾ in.

Mr. Otstot reports that as the result of modifying the manipulating procedure he is very seldom troubled with buckles. The mat packing table usually is the bottleneck in any stereotype department because of lack of room for space upon which to lay them singly. By this method (air drying the mats) the bottleneck is eliminated because the mats can be stacked one upon another. The danger of steam from the latest mat damaging the casting face of the mat on top of the pile is eliminated. The mats are packed when the force can get to them, after which they are placed in the master Sta-Hi former.

The operation is as follows: First the mat is molded and trimmed. Then it is placed in a flat Form-O-Scorch face down. The thermostat is set at 175 deg. A Cramer timer was installed to regulate pre-drying time. The timer interval settings may be from 1 sec. to 5 min. according to the needs of the user. The timer is of the buzzer type and is set for ¾ in. mat shrinkage in 1 min. 20 sec.

The mat is then taken from the flat scorcher and is placed face down upon a ¼ in. mesh wire screen shelf. The screen shelves are built in under steel top cut tables.

The mat should be left on the shelf for at least 15 sec., or more, to permit steam to escape from the casting and back sides of the mat before stacking them on the packing table.

By using this mesh screen shelf method, the moisture leaves the mat uniformly over the entire surface. This helps hold the impression in the mat. Very seldom is there any trouble from buckles in the mat.

Enough moisture remains in the mat after pre-shrinking in the flat scorcher and air-drying on the screen shelf to permit the Sta-Hi machine to form and dry out the mat before placing it in the curved plate casting box. In this plant, the Master Sta-Hi is set for 1 min. 45 sec. time.

It will be seen that the three drying operations — pre-shrinking, air-drying, and forming—are timed to insure uniform results.

Mr. Otstot also reports that in the year and a half during which this method has been used, his department has had little or no trouble with shrinkage problems.

To demonstrate the moisture content remaining in the mat after removal from the flat scorcher, Mr. Otstot laid a mat on the clean, dry surface of a mat trimmer for a few seconds. Some idea of the amount of condensed steam transferred from mat to the metal trimmer bed can be obtained by looking at Fig. 2. While Mr. Otstot swept his finger tips across the moistened trimmer bed, our photographer snapped the picture.

Fig. 2.—Stereotype Supt. Frank Otstot of Springfield (O.) *News* and *Sun*, by passing finger tips over trimmer bed demonstrates moisture transferred from incompletely pre-shrunk mat just taken from flat pre-shrinker. Moisture passed from mat to bed in few seconds.

Illinois Conference

The Illinois Newspaper Mechanical Conference will be held October 8 and 9, 1949 at the Orlando Hotel, Decatur, Ill. The following officers will preside over the sessions: President, Sid Scott, Decatur (Ill.) *Herald-Review*; Vice President, Arthur Kramer, Joliet (Ill.) *Herald-News;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc. Directors for the 1949 Conference are A. M. Massengale, Multi-Ad Service Inc., Peoria, Ill.; Clarence Snethen, Waukegan (Ill.) *News-Sun*; Edward Raymond, DeKalb (Ill.) *Chronicle*; Clifford Entler, Decatur (Ill.) *Herald-Review*; Earl Anderson, Rockford (Ill.) Consolidated Newspapers; and Howard M. Colton, Bloomington (Ill.) *Pantagraph*.

Blueprint

of Printing Equipment Industry's Position in Standby Program

By PETER B. B. ANDREWS*

**Former Industrial Economic Advisor, Printing & Publishing Division, War Production Board*

II.

IN THE last issue of *Printing Equipment Engineer*, we discussed the writing of an extensive history of our actions in World War II. The order to do this had come directly from President Roosevelt, who asked that for the sake of posterity we show clearly the pattern and significance of events—in effect a *blueprint* of the program to be followed in the event of any future emergencies, in war or peace.

The position of the graphic arts industry always held great respect in the President's mind, and many major policy decisions on regulating it had gone all through the numerous sub-regulatory bodies to the President for a decision.

Early struggles and mistakes we made up to about the middle of July, 1942, were detailed in the last issue of *Printing Equipment Engineer*. From July 15, 1942 to January 4, 1943, Order L-83 was our controlling order. But because no single Industry Division provided strong sponsorship for the order, the various machinery sections hitherto using the order began preparing their own orders.

The Printing & Publishing Division began working on its own limitation order in September, 1942. Here were the chief reasons why we needed a new order:

1. We lacked control over military orders that were being placed for printing machinery. The military was able to rate on PD3A's, and in some instances was ordering far in advance of actual requirements.

2. When the revised L-83 of May 18, 1942 lifted the prohibition on production, we expected that manufacturers would produce new machinery only to the extent that they received rated orders of A-9 or higher, and then only from materials they had on hand. But we found some instances where manufacturers completed machines which we definitely would never have specifically authorized to be completed. There was no essential civilian requirement for them.

But once the machines were finished, we were faced with an unhappy choice: either to approve PD1A's and rate them A-9 for an obviously unessential use, or instead to deny the applications and refuse to let the manufacturers get their money out of the finished machines. As long as there was no specific prohibition on making an item of printing machinery, some manufacturers would continue to make it.

3. There was a growing demand throughout the whole of WPB for tighter controls. M-126, the Steel Conservation Order, was progressively tightened from forbidding the use of steel in pinball machines, juke boxes, and bobby pins to the point that industrial machinery was faced with the threat of being put under M-126. Paper Mill Machinery which remained under L-83 actually was put on M-126. Printing Machinery was not, only because we promised to issue an order even stricter. Metals were so critically scarce at this time that for the fourth quarter of 1942 we were allowed to allot under P.R.P. only 22% of the manufacturer's stated requirements for metals to be used in making repair parts.

It took from late August 1942 until January 4, 1943 to complete the new Limitation Order on Printing Machinery. The Commercial Printing Section advocated limitation on production of repair parts and the requirement of a certification by users that old parts of like kind would be scrapped. The Commercial Printing Section even advocated that the order require the scrapping of obsolete machinery.

The Governmental Section, influenced by the Commercial Laundry Machinery Order, advocated the use of the release form PD-556 for deliveries instead of PD1A's. The Governmental Section was especially anxious to get delivery controls over military spending for printing equipment.

However, the Army objected, the Navy objected, and the Engineers Corps objected. And there was internal objecting within WPB from the Office of Civilian Supply. The Services Equipment Division had jurisdiction over office machinery. Multigraphs and multiliths from that Division overlapped with Printing Machinery. As a maneuver to avoid conflict with L-54-C, we had to redefine "Printing Machinery" and "Printed Matter" to exempt these office machines.

At last, on January 4, 1943, Limitation Order L-226 was issued. L-226 restricted production and delivery of new machinery; delivery of used machinery less than 5 years old (newer than May 1, 1937); and production and delivery of repair parts and operating supplies. It is to be noted that L-226 was prepared entirely without benefit of advice from industry advisory committees.

No sooner had the order been issued than machinery manufacturers individually protested. Some advocated suspending the order and reverting to L-83. Others pointed out that WPB stood liable to receive thousands of PD-556 applications per month for the low-value operating supplies, some of which were made of wood, textile fabrics and glass, not then critical materials.

The very harshness of L-226 would invite innumerable violations. So the order was amended February 10, 1943, exempting transactions in items valued less than $25 from the need for specific PD-556 delivery approvals.

After that we settled down to what turned out to be 20 months of living with the February 10, 1943 issue of L-226. It became apparent very early that we should never have restricted production of new machinery entirely. And within a few weeks after February 10, 1943, we were receiving appeals from manufacturers to produce machines and equipment.

(*Continued on Page 104*)

Importance of Paper Thickness in Printing

By M. S. Kantrowitz, Technical Director, U. S. Government Printing Office, Washington, D. C., and Chairman, Printing Committee, Washington Club of Printing House Craftsmen.

PAPER thickness may be defined as the distance between two parallel plane surfaces pressed with a given pressure against opposite sides of a paper specimen consisting of a single sheet or a stack of several sheets.

The method for measuring the thickness of paper states that the thickness of paper or paperboard is the thickness (in thousandths of an inch) of a single sheet when placed under a steady pressure of 7 to 9 pounds per square inch between two circular and parallel plane surfaces.

Like all other physical characteristics, the thickness of the paper is affected by its moisture content. Thickness measurement should, therefore, be performed under standard conditions of relative humidity and temperature.

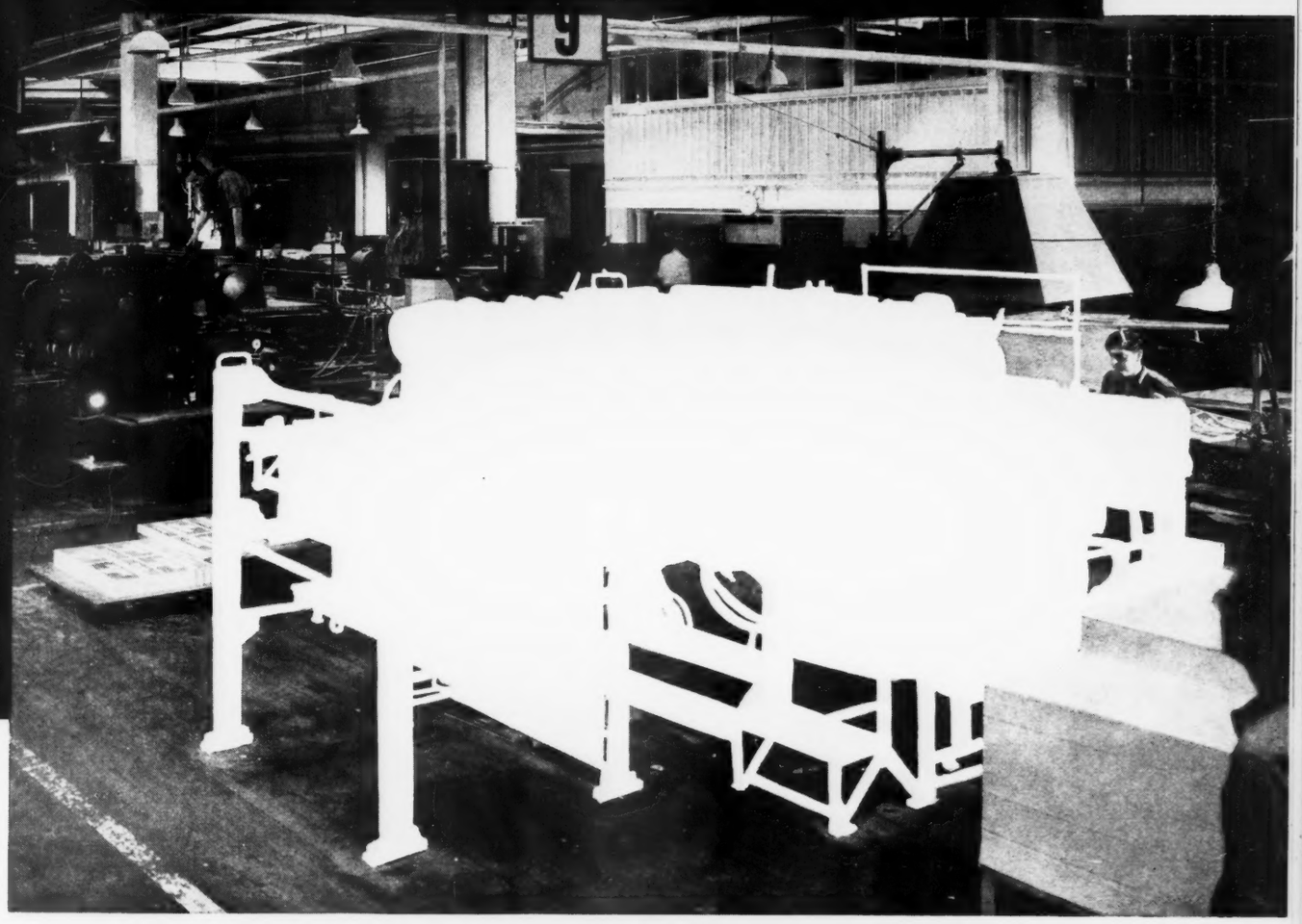
Uniform paper thickness is essential for good printing. Variation in thickness of paper results in variations in backness or color intensity of the inks and interferes with the consistent printing quality of the sheet. It is readily seen that if the press makeready is prepared for a certain thickness of paper, a thicker sheet, in passing through the press, will receive a greater degree of impression and will not, therefore, result in the proper tonal value of the printing. It would also tend to force the type into the sheet and produce an embossed effect on its reverse side. This heavier impression may also cause "strike-through" by forcing the ink deeper into the paper. If the press makeready is for a thick paper, any thinner paper will receive a lighter impression.

Thickness of book paper is of paramount importance in controlling the bulk of the finished book. Individual volumes of a set of books printed on the same grade and weight of paper and containing the same number of pages are required to have the same bulk.

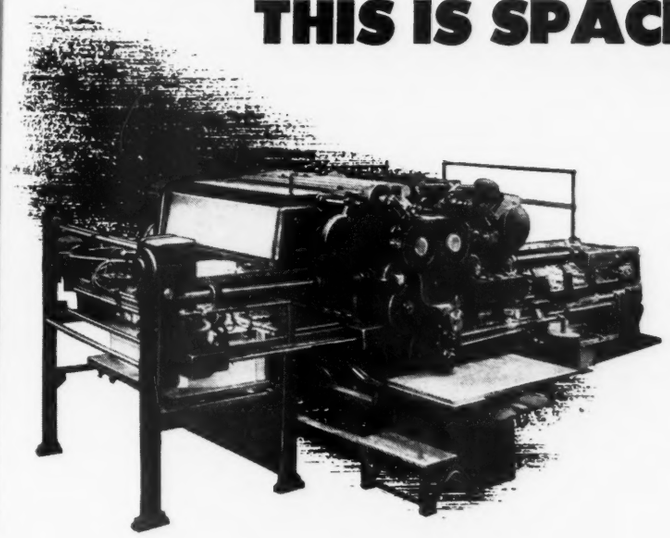
Index paper must not exceed the specified thickness in order to economize filing space.

Thickness of U. S. postal card paper is important in relation to the printing and production operations.

Tabulating card paper must be made with exacting thickness, within the tolerance specified, in order to function properly in the tabulating machines which are adjusted for exact feeding and sorting.



THIS IS SPACE YOU CAN USE...



You can fill this void in your plant with the Cottrell two color, sheet fed rotary press. You will be in the ideal position to realize every benefit from multicolor printing.

The demand for fine color printing is growing... its future is brighter than ever, and this is the press that can put your business out in front and keep it there!

The normal production speed of this Cottrell press ranges up to 5500 sheets per hour, delivering a maximum net production.

Cottrell

C. B. COTTRELL & SONS CO.

Westerly, R. I.

New York: 25 E. 26th St. • Claybourn Division: 3713 N. Humboldt Ave., Milwaukee, Wis.
Chicago: Daily News Bldg., 400 W. Madison St.
Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

Small Business
In the Majority

(Abstracted from an article appearing in *The Christian Science Monitor* by Tully Nettleton and Kimmis Hendrick, Staff Writers.)

OF ALL the major lines of manufacturing, the one with the greatest proportion of small business is printing. Ninety-five per cent of the establishments in the printing and publishing business employ fewer than 50 persons, unless the situation has changed materially since the 1939 census of business, and there is no indication that it has. That survey found that more than half the print shops in the United States hired from one to five employees. Of the remainder, more than 14 per cent were one-man shops, operated by the proprietor alone. And nearly 23 per cent hired from six to 20 employees.

Pressroom line-up table at The Baring Press, Inc., Detroit, Mich., designed by Martin Pentrak, an employee of the firm.

Small

Line-up Table

PRESSMEN at The Baring Press, Inc., in Detroit, Mich., are making good use of a small line-up table designed by one of their fellow craftsmen, Martin Pentrak. The table was made in the plant. Earl J. Bierbauer, Plant Superintendent, has also found it to be an invaluable aid in squaring-up press forms for register.

Principal materials which went into the table's construction are a glass laboratory slab, 2 in. by 4 in. pine lumber, angle irons and 24 in. carpenter's T-square. The base and top frame of the device are made solely of wood with 2 in. leg supports. The 1⅛ in. thick plate glass withstands the weight of a person leaning on it while working at the table. Two lengths of 1½ in. angle iron embedded in the frame are fastened along the right and back sides of the table. These serve as straight-edges against which the T-square is banked in aligning work.

Discarded refrigerator spring catches with rubber-faced gripping fingers prevent movement of the sheet on the table top. These are adjustable to compensate for different size sheets from the various presses.

Length of the table top including the wooden frame is 30 in. while the width is 27¼ in. The width of the base is 19¾ in. The table top stands 34½ in. above the floor. Two swivel casters at the front of the base enable the table to be moved about the pressroom wherever it is needed. A shelf built under the top can hold additional proofs or any necessary small working materials.

A VALUABLE BOOK

FOR MECHANICAL AND PRODUCTION EXECUTIVES

The *VIIIth Graphic Arts Production Year Book* should be in the hands of every mechanical and production executive. Commercial and newspaper printing plant executives, will find this encyclopediac volume of constant help to them. A mass of detail which no executive can keep in mind will be found in this book.

Printing plant executives supposedly have a comprehensive overall knowledge about printing and fabricating process questions which come up frequently.

Eight Sections—1. Art and photography; 2. Photo-engraving; 3. Electrotypes and Duplicate plates; 4. Paper; 5. Printing processes; 6. Binding and mailing; 7. Typography; 8. Buyers' guide and indexes.

Size, 8½ in. by 11¼ in.; 700 pages with 900 illustrations with many beautiful color inserts by all processes. Bound in gray crash cover.

PRICE $15.50 per copy, please send remittance with order

PRINTING EQUIPMENT *Engineer*

1276 WEST THIRD STREET • CLEVELAND 13, OHIO

Artwork Storage Cabinet — Foster Mfg. Co. has announced a dust-proof artwork storage cabinet having dimensions of 38½ in. high, 20½ in. wide and 28 in. long. Free riding drawers operate on extended runners and each measures 18 in. by 25 in. by 3 in. deep. Aluminum handles and nickel plated index card holders are standard equipment. Further details may be obtained from *Printing Equipment Engineer*.

No Need for Alarm—Use Sensible Precautions

IN THE May issue, **Printing Equipment Engineer** published abstracts from Safety Reprint No. 9 distributed by the National Safety Council. The statements were concerned with disposal of burned out fluorescent lamp tubes. It was stated that the disposal of burned out fluorescent lamp tubes may introduct a health hazard. Such hazards include the dust of beryllium compounds with which the tubes are coated may be inhaled; cuts or scratches from the broken tubes may retain some of the beryllium compounds; and mercury vapor may be inhaled.

It appears that the U. S. Public Health Service has been informed that lamp manufacturers plan to discontinue the use of beryllium in the making of fluorescent lamps after June 30. During the transitory period, or until present tubes have been eshausted, it is suggested that users of fluorescent lamps observe all suggested precautions with respect to their handling and disposal of burned out tubes.

Printing Equipment Engineer's concern in discussing the disposal of burned out tubes is to assure its readers that there is no occasion for participating in the mild hysteria which seems to exist in some parts of the country as the result of newspaper and radio reports. This does not mean, however, that proper precautions with respect to tube disposal should not be taken. Safe disposal of old tubes and prompt medical attention for cuts are imperative.

An executive of the engineering department of one of the manufacturers of fluorescent lamp tubes states that the powders which have been used in fluorescent lamps are toxic to some people under certain conditions but apparently they are not toxic to all individuals nor to the same extent. He also stated that the lamp manufacturers have never had a desire to minimize any hazard that does exist.

It is pointed out by one lamp maker that around 500 million lamps have been produced since they were first introduced in 1938, and the number of reported inflammations traceable to beryllium have been infinitesimal.

A press release dated April 7, 1949, was issued by the Medical Advisory Committee on Beryllium at its meeting in Detroit, Mich. It reads as follows:

"The Medical Advisory Committee on Beryllium, under the chairmanship of J. G. Townsend, M.D., Chief of the Industrial Hygiene Division, U.S. Public Health Service, Washington, D. C., after studying the beryllium problem for several years is of the opinion that due to recent publicity there has been an unusual amount of interest in the possible injury to health from the use of fluorescent lamps. It should be pointed out that the intact fluorescent lamp is harmless when used for lighting.

"More recently there have been several reports of slow healing and local swelling of cuts in the skin by glass from broken fluorescent lamps. This has been occasionally seen in children who have found discarded lamps and have broken them at play. Although these cuts may remain unhealed for a long time, they do not spread further or cause any general sickness. Such cuts should always receive prompt medical care which to date consists of thorough cleansing of the wound and removal of all foreign material. If the wound fails to heal then surgical care is necessary.

"Despite the millions of fluorescent lamps in household use, there has been no record of injury on breathing the dust resulting from the occasional breakage of a lamp."

A lamp engineer states that the same common-sense methods should be used in breaking up fluorescent lamps as would be used under similar conditions where glass and dust are involved. There is probably no one best method of breaking up these tubes said he, because much depends upon the type of industry, facilities, number of lamps to be disposed of daily, etc.

Any method which includes the following fundamentals should be good: (1) Full protection to the eyes by the use of goggles; (2) Protection to the hands by the use of heavy gloves, and (3) Protection against infection by thorough cleansing of all wounds. In the case of very large quantities of lamps, or wherever other conditions warrant, the use of approved respirators and protection against air contamination by some type of dust control are advisable. In addition, this engineer suggests that if the vacuum in a tube is first destroyed by the use of a sharp instrument, the tube can be broken without the usual danger of flying glass Another method is to put burned-out lamps into the sleeves from which new lamps have been taken; the burned out lamps and sleeves are then smashed up together. This also reduces flying glass.

With reference to the suggestion that burned out lamps be broken up under water, it is not always convenient to destroy lamp tubes this way. An alternative suggestion which is reported to be universally acceptable, and which is practicable and safe, is to slide the burned out lamps into the sleeves from which the new ones have been taken, so that they can be carried off to a dump where they are crushed under the truck wheels and then buried by piling more debris on top of them.

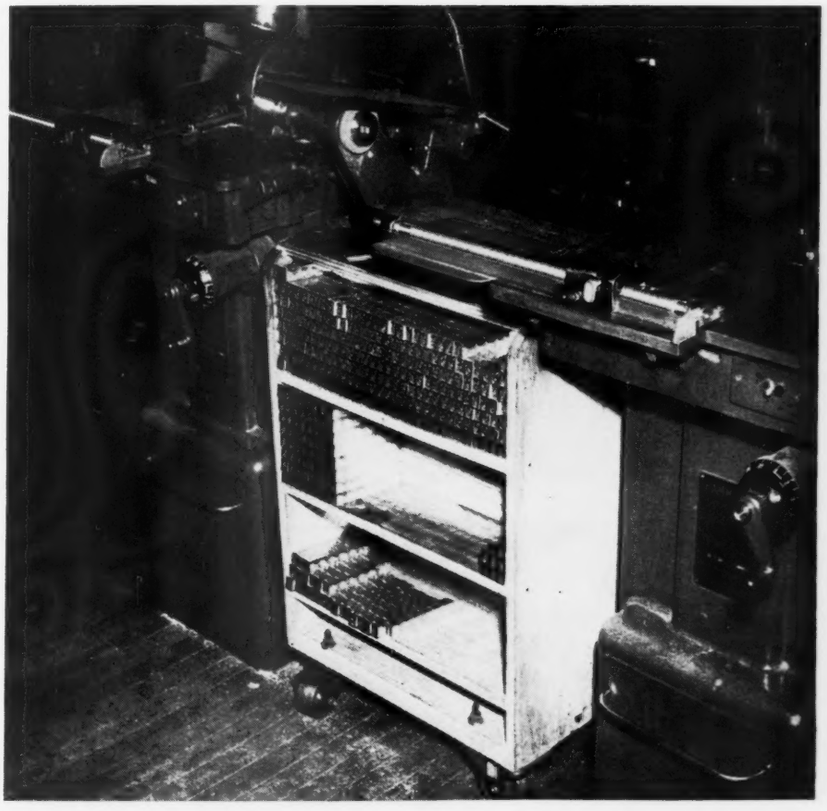
Naturally, one of the main points of concern among parents is to prevent injury to their children. The discarded tubes should not be available to children for use, for instance, as baseball bats.

If anyone should be cut by a broken tube, prompt medical attention is in order, irrespective of the injury taking place in the home, at play, or in industrial environment.

TRUCK SAVES GIANT CASTER BASE HANDLING TIME

A TRUCK has been designed by Sam Culler, Chief Machinist, the Washington (D.C.) *Post*, which eliminates double handling of Giant Caster Base. At the same time, it puts a plentiful supply of 2, 3 and 4-col. base in the ad room immediately adjacent to the saw-trimmers where the ad compositors can prepare base or spacing material in minimum time.

The photograph shows a front view of the loaded truck between two saws. Each shelf, beginning at the top, carries Giant Caster Base in 2, 3 and 4-col. widths. The truck is



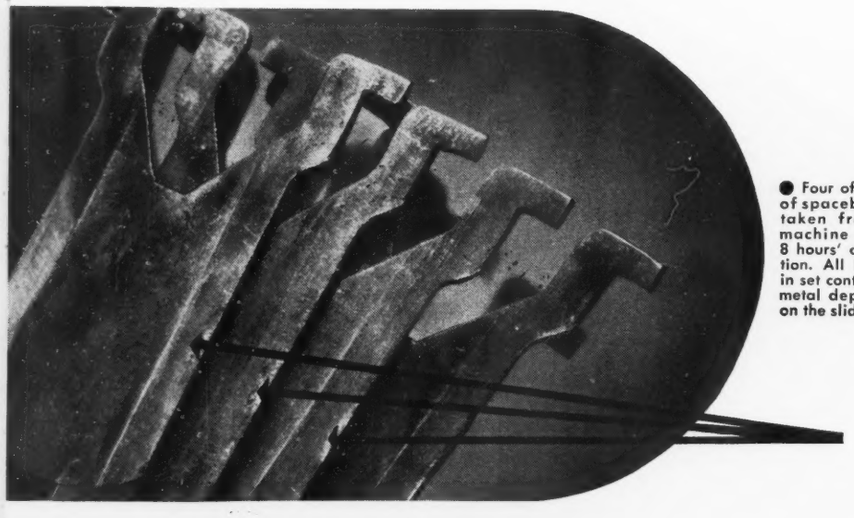
open at front and back. When supply is exhausted on the front side, the truck is wheeled about, giving access to the base material on the other.

Usual procedure at the Washington *Post*, prior to the time Mr. Culler designed the new trucks, was to store the base in racks. This meant handling time wasted in at least two operations and not always was the material immediately available to the men in the ad room. Now the trucks are loaded directly from the machines in the Monotype room and pushed into the ad room where they occupy a position immediately adjacent to the saws. Being fitted with swivel casters, the trucks are designed to be moved easily, even when loaded to capacity of 1,000 lbs., and will not tip over.

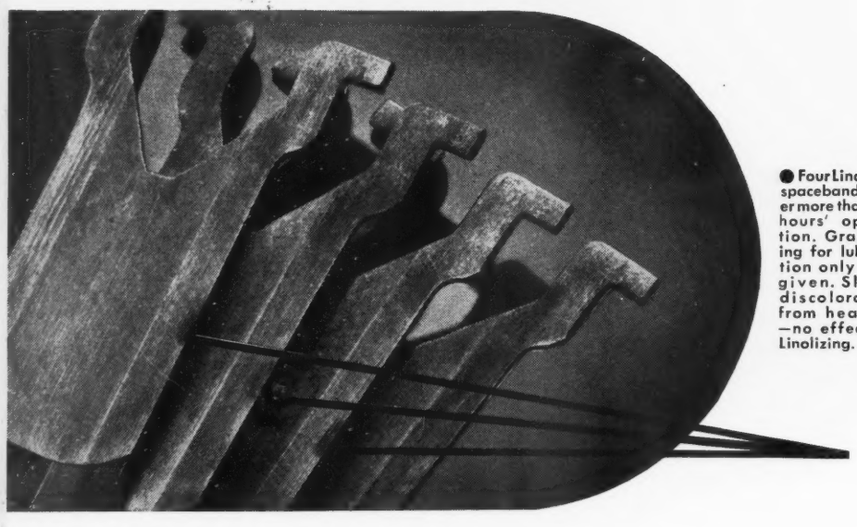
The trucks have been in use for two years and have the enthusiastic acceptance of the printers in the ad room. They say the trucks provide the most convenient place possible for base material. Since the truck supports a considerable weight of metal, it must be substantially built. Design and dimension details will be furnished gladly by Mr. Culler upon request.

Linolized* spacebands

A PRODUCT OF LINOTYPE RESEARCH



● Four of a set of spacebands taken from a machine after 8 hours' operation. All bands in set contained metal deposits on the slides.



● Four Linolized spacebands after more than 240 hours' operation. Graphiting for lubrication only care given. Slight discoloration from heating—no effect on Linolizing.

- Cut maintenance time and matrix damage
- Eliminate cleaning metal from spacebands

Set in Linotype Caledonia, Erbar and Spartan

**Trade mark—surface treated*

OTYPE LINOTYPE LINOTYPE LINOTYPE LINOTYPE LINOTYPE

LINOLIZED SLIDES on spacebands are the greatest development yet introduced for cutting matrix damage and maintenance time. Matrix side walls do not become crushed through metal adhesion to spacebands. Processed spacebands have been run for almost a year without showing any signs of metal accumulations.

HOW LINOLIZING IMPROVES SPACEBANDS...Linolizing is a special process for coating metals with a hard, dense alloy. The hard alloy is vaporized in a vacuum at extremely high temperatures. A sputtering technique, similar to that used in coating optics, deposits the alloy on the base metal. The alloy then becomes an integral part of the base metal, producing a surface hardness 20% greater than that of high-speed steel. After spaceband slides have been processed, type metal will not adhere or become fused to the hard, lustrous, Linolized surfaces.

NEW LINOLIZED BANDS OR SLIDES AVAILABLE...New spacebands with Linolized slides are available for only $1.65 each, complete. Slides alone are $1.00 each if you care to install them on your present wedges. Linotype spaceband wedges can be reconditioned by Mergenthaler and new Linolized slides installed for $1.20 each. Send spacebands with order to Receiving Department, Mergenthaler Linotype Company, 23 Hall Street, Brooklyn 5, New York.

LINOLIZED MOLDS ALSO AVAILABLE...Linolized molds cut maintenance time, eliminate most frequent cause of hard ejection and cut matrix damage. Metal does not build up or become fused to mold surfaces. Even after months of continuous operation, Linolized molds do not require special cleaning or polishing. Wiping with a soft cloth is the only maintenance normally required.

All Linotype molds in good condition can be Linolized. Linotype Universal Adjustable and Advertising Figure molds (not recessed) will be Linolized for $20; recessed and display Linotype molds, $25 exclusive of repair work. Send molds with order to Receiving Department, Mergenthaler Linotype Company, 23 Hall Street, Brooklyn 5, New York.

• • •

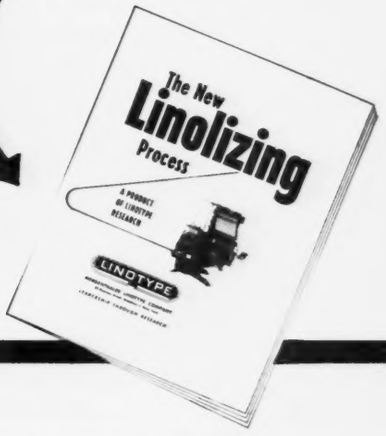
ORDER NOW...All owners of Linotypes can now cut maintenance time. Install Linolized spacebands and molds at an amazingly low cost. Order from the address below or write your nearest Linotype representative.

PREVENT DAMAGE TO MATRICES...Linolized spacebands prevent crushed matrix side walls caused by particles of metal adhering to the casting surfaces of spaceband slides.

CUT MAINTENANCE TIME...Reductions in maintenance time up to 50% have been reported. It is no longer necessary to clean type metal from spacebands every shift. Occasional graphiting for lubrication is the only

Send for* FREE *brochure

Clip coupon and mail today. Contains illustrations and complete information about the Linolizing process.



MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, New York

Offices and representatives: Boston, Chicago, Los Angeles, New Orleans, New York City, San Francisco; Canadian Linotype, Limited, Toronto

LINOTYPE
T.M.

LEADERSHIP THROUGH RESEARCH

LINOTYPE LINOTYPE LINOTYPE

Mergenthaler Linotype Company, Dept. PEE-58
29 Ryerson Street, Brooklyn 5, New York

Gentlemen:
Please rush my copy of the new 12-page brochure on Linolizing.

NAME.....

COMPANY.....

POSITION.....

ADDRESS.....

CITY.....ZONE.....STATE.....

Conference Dates *(with organization names and principal officers)*

American Photoengravers Association — 1949 Convention and Exhibition, Fairmont Hotel, Nob Hill, San Francisco, September 12, 13, 14. Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—Palmer House, Chicago, Monday, Tuesday and Wednesday, June 6, 7 and 8, 1949. Chairman of the Committee, Edwin H. Evers, Production Manager, St. Louis *Globe-Democrat*. Acting Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference—Hotel Biltmore, Dayton, O., June 17 and 18. Ollie G. Fricke, Fifth District Representative, 43 West Apple St., Dayton, O.; Secretary-Treasurer, John Fisher, Superintendent, Reardon-Parshall Co., 466 Larned St., N. W., Detroit, Mich.

Great Lakes Newspaper Mechanical Conference—Hotel Schroeder, Milwaukee, January 15, 16, 17, 1950. President W. R. Coddington, Composing Room Supt., Youngstown (O.) *Vindicator;* Secretary Al. P. Oberg, Flint (Mich.) *Journal;* Arrangement Chairman J. E. McMullen, Pressroom Supt., Milwaukee *Journal;* Chairman Mfrs. and Suppliers Committee, George Morrison, Morrison Co., 125 W. Melvina St., Milwaukee 12, Wis.

Illinois Newspaper Mechanical Conference—1949 Conference to be held at Orlando Hotel, Decatur, Ill., October 8 and 9. President, Sid Scott, Decatur (Ill.) *Herald-Review;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

International Association of Printing House Craftsmen—1949 Convention to be held in San Francisco, Palace Hotel, September 4, 5, 6, 7, 1949. President, Gradie Oakes, Process Color Plate Co., 522 So. Clinton St., Chicago 7. Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Typographic Composition Association—1949 Convention to be held at Hotel Statler, Boston, Mass., September 22, 23 and 24. Frederick H. Lutz, President, Brockton, Mass.; Frank M. Sherman, Executive Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — 1950 meeting in Ottumwa, Ia. President, Howard (Red) Lee, Composing Room Supt., Ottumwa (Ia.) *Courier;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald*.

Kansas Newspaper Mechanical Conference — 1949 meeting to be held at Hotel Kansan, Topeka, Kan., October 1 and 2. President Vern Williams, Mechanical Supt., Topeka Newspaper Printing Co., Topeka, Kan.

Lithographers National Association — President, Randolph T. Ode, President, The Providence Lithograph Co., Providence, R. I.; Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — 1949 Conference, Hotel Conner, Joplin, Mo., September 10 and 11. President, Paul S. Ginn, Press Foreman, Sedalia (Mo.) *Democrat-Capital;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index;* Chairman of Supply Men's Committee, Robert Robinson, Representative, Certified Dry Mat Corp., 9 Rockefeller Plaza, New York 20, N. Y.

National Association of Litho Clubs — Secretary, William J. Stevens, 317 West 45th St., New York 19, N. Y.

National Association of Photo Lithographers — 1949 convention will be held at Hotel Statler, New York, N. Y., October 19, 20, 21 and 22. Executive Vice President, Walter E. Soderstrom. 317 West 45th St., New York 19, N. Y.; Executive Secretary, William J. Stevens, 317 West 45th St., New York 19, N. Y.

National Graphic Arts Education Association — 24th Annual Conference on Printing Education, Pressmen's Home, Tenn., June 20-23, 1949. John G. Henderson, President; Fred J. Hartman, Educational Director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 11 to September 23, 1950. Headquarters for National Graphic Arts Exposition, Inc., at Room 802, 105 W. Monroe St., Chicago. President, A. E. Giegengack; Secretary, S. Frank Beatty, Graphic Arts Assoc. of Illinois, Chicago. During the period, September 11 to September 23, 1950, a number of Graphic Arts associations will hold their annual conventions as follows: Intl. Assoc. of Printing House Craftsmen, Hotel Stevens, Sept. 10, 11, 12 and 13, 1950; Intl. Typographic Composition Assoc., Sheraton Hotel, Sept. 14, 15 and 16; Printing Industry of America, Palmer House, Sept. 17, 18, 19 and 20, 1950; National Graphic Arts Education Assoc., Hotel Sherman, Sept. 21, 22 and 23, 1950.

National Printing Equipment Association, Inc. — President, R. Verne Mitchell, Harris-Seybold Co., 4510 E. 71st St., Cleveland 5, O. James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — 1949 Conference, Hotel Statler, Boston, Mass., October 29 and 30. President, George F. Marshall, Mechanical Supt., Portland (Me.) *Press-Herald-Express*. Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

Northwest Mechanical Conference — 1950 Conference, Hotel St. Paul, St. Paul, Minn. Tentative dates, March 10, 11, 12. President, Joseph J. Cory, Chief Composing Room Machinist, St. Paul (Minn.) *Dispatch* and *Pioneer Press*. Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference—President, Harold Winn, Hollywood *Citizen-News;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News*.

Pacific Society of Printing House Craftsmen — Annual conference in connection with International convention at San Francisco. Society session scheduled for Palace Hotel, Sunday, September 4, 1949. Secretary-Treasurer, R. W. Hardy, 71 Columbia St., Seattle 4, Wash.

PNPA-NJPA Joint Mechanical Conference — Date and place of 1950 Conference to be announced later. Conference director, Theodore A. Serrill, PNPA Associate Manager, Telegraph Bldg., Harrisburg, Pa.

Printing Industry of America — Hotel Biltmore, Los Angeles, November 13-17, 1949. James R. Brackett, General Manager, 719 Fifteenth St. N. W., Washington, D. C.

SNPA (Eastern Div.) Mechanical Conference — Atlanta Biltmore Hotel, Atlanta, Ga., August 29 and 30, 1949. Chairman, Luther Wright, Mechanical Supt., New Orleans (La.) *Item;* Secretary, Tom Tanner, c-o SNPA, P.O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supply and Equipment Group, Owen W. Asbell, Ludlow Typograph Co., representative in Atlanta, Ga.

SNPA (Western Div.) Mechanical Conference—Chairman, George N. Guthrie, Pressroom Supt., Little Rock (Ark.) *Gazette;* Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex. 1950 Conference dates and meeting place to be determined later by Executive Committee.

Technical Association of the Lithographic Industry — (TALI)—1950 meeting scheduled for second week in April, Rochester, N. Y. President, Michael H. Bruno, Lithographic Technical Foundation, Glessner House, 1800 So. Prairie Ave., Chicago 16, Ill. Secretary-Treasurer, Geo. W. Wilhelm, 814 N. East Ave., Oak Park, Ill.

For artwork that SELLS...

Complete sets of twenty Kodak Fluorescent Water Colors are obtainable from your Kodak Graphic Arts dealer in ¼-ounce jars and 1-ounce jars.

KODAK FLUORESCENT WATER COLORS

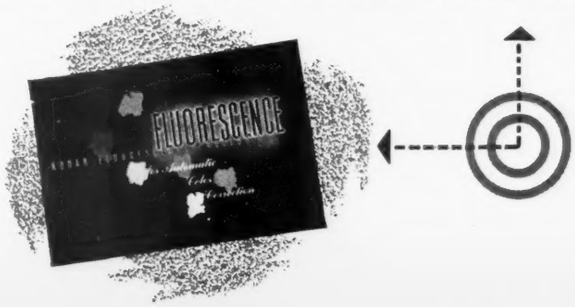
ART is called commercial when it is created to do a job. Usually, its job is selling something. And how well it does its selling job depends on how well it can be reproduced by a printing press.

Printed reproductions of conventional water-color artwork usually are a compromise between the artist's original painting and the color-correction handwork of the photomechanical artist. And such time-consuming handwork is essential to reproduce conventional water colors with process printing inks.

The next time you need artwork to do a selling job, specify Kodak Fluorescent Water Colors to your artist. Any artist can use them. And any photoengraver or photolithographer equipped with a Kodak Copyboard Hood can give you a more faithful reproduction of such artwork much more quickly than you could obtain a reproduction from conventional water-color art. You can get it more quickly because the color-correcting fluorescence in Kodak Fluorescent Water Colors does away with most—if not all—of the hand color correction required with conventional water-color artwork. And the reproduction will be more faithful to the original because the minimum of retouching required preserves the artist's original with photographic fidelity.

Kodak Fluorescent Water Colors are obtainable from any Kodak Graphic Arts dealer. There is one near you. If you would like more information about the Kodak Fluorescence Process, ask your dealer today, or write directly to Rochester.

This free booklet, "Kodak Fluorescence Process for Automatic Color Correction," is yours for the asking. For your copy, simply mail a postcard or letter with your name and address to Department 8, Eastman Kodak Company, Rochester 4, N. Y.



GRAPHIC ARTS DIVISION
EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

"KODAK" IS A TRADE-MARK

Kodak

Handling Press Rollers

THE Alico Truck and Track System is designed to facilitate the handling of rubber covered rollers when removing or installing them on arch or unit type newspaper presses. The rollers, weighing 150 lbs. or more, must be handled carefully to avoid damage to the inking surface.

The Alico System consists of two separate assemblies—a portable floor track to be placed between press units and a truck upon which the rollers may be taken from or brought to the press unit. Sponsor states the Alico System may be incorporated with new or existing press units.

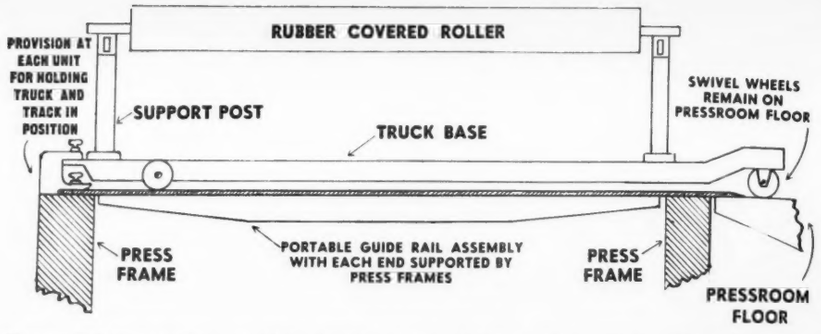
A portable rail (or track) assembly is provided to guide the Alico Truck as it passes into or out of the space between units while removing or replacing the rubber rollers. One guide rail assembly will serve for any number of press units, since it is portable. Provisions are made at each unit for holding and positioning the truck while it is being used. The rail is constructed from light-weight metal for ease in handling.

The transporting truck itself if substantially constructed (see diagrams). The rear truck wheels are spaced farther apart than the front wheels since they remain outside the press unit when a roller is to be removed from or placed on the truck. The rear wheels remain on the pressroom floor and are fixed far enough apart to prevent tilting of truck while inking roller is being transported on the truck. These rear wheels are of swivel design to facilitate directing the truck into or out of press units.

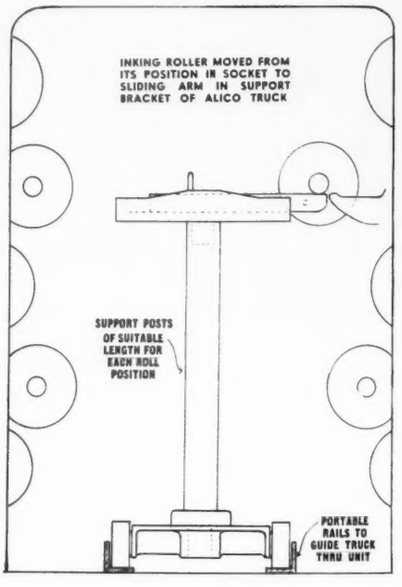
The truck is equipped with inking roller support brackets and slide arms onto which the rollers are moved after being removed from their sockets in the press frames. The slide arms are extensible in the supporting brackets and when extended against the sockets, the inking roller can be moved from its sockets onto the truck arms without manual lifting.

The supporting posts of the truck are of whatever lengths are required to bring the support brackets and slide arms to the height of the inking rollers. For instance, in the case of the Goss Headliner press, four pairs of posts are furnished with the Alico Truck. A post is unnecessary for the lower position as the support bracket is used without post to remove the lower roller.

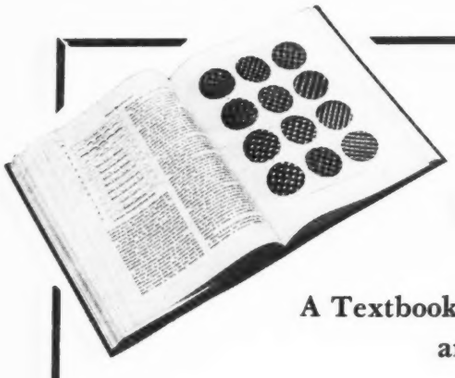
In cases where the upper form roller is in such position that its surface extends above the side frame, means are provided so the truck's roller support bracket can be lowered and raised to permit moving the inking roller from or into the press unit without striking the side frames. Further information may be obtained through *Printing Equipment* Engineer.


RUBBER COVERED ROLLER
PROVISION AT EACH UNIT FOR HOLDING TRUCK AND TRACK IN POSITION
SUPPORT POST
TRUCK BASE
SWIVEL WHEELS REMAIN ON PRESSROOM FLOOR
PRESS FRAME
PORTABLE GUIDE RAIL ASSEMBLY WITH EACH END SUPPORTED BY PRESS FRAMES
PRESS FRAME
PRESSROOM FLOOR

Side elevation diagram of Alico Truck and portable track assembly. The diagram is self-explanatory.


INKING ROLLER MOVED FROM ITS POSITION IN SOCKET TO SLIDING ARM IN SUPPORT BRACKET OF ALICO TRUCK
SUPPORT POSTS OF SUITABLE LENGTH FOR EACH ROLL POSITION
PORTABLE RAILS TO GUIDE TRUCK THRU UNIT

This is an end-view diagram of the Alico Truck which is used to remove and replace rubber inking rollers on arch or unit type newspaper press units.



MODERN Photoengraving

A Textbook for Printing's Production and Mechanical Executives

By Louis Flader and J. S. Mertle

Many executives know little about photoengravings or how they are made. Many look upon photoengraving as a secret process. Many would like to comprehend the process fully. Every operation fully explained.

MODERN PHOTOENGRAVING is an up-to-the-minute textbook on photoengraving covering every practice of this important process.

Contents: Glossary defining 775 trade terms; 334 pages; 18 chapters, each dealing with a branch of photoengraving; 47 Tables of Data; 206 Chemical and Mathematical Formulas; 392 Illustrations; Tables of Weights and Measures and Conversions; Process Hygiene; 21 Pages of Index; Size, 8¾ in. by 11¼ in.; Dark Fabrikoid, Gold Stamped Cover.

Price $15 postage free. Prepayment with order. $16 in countries outside the United States and Canada.

PRINTING EQUIPMENT Engineer

1276 West Third Street **Cleveland 13, Ohio**

Morrill Increases Truck Fleet

Another addition to the truck fleet of Geo. H. Morrill Co., Div. of Sun Chemical Corp., has been announced by Ralph C. Persons, General Manager. The recent additions include three tank trucks and one trailer van. The latter has a carrying capacity of fifty 55 gal. ink drums. The Morrill fleet now totals 35 delivery vehicles.

Consolidated

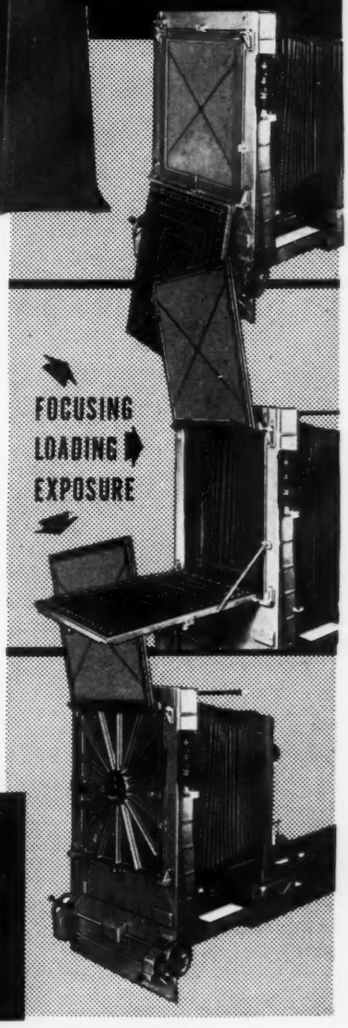
16 x 20 INCH DARKROOM PROCESS CAMERA

. . SMALL IN SIZE . .
A GIANT
IN VERSATILITY !

The 16" x 20" Consolidated Process Darkroom Camera, the most versatile all purpose Camera capable of producing the greater majority of line and halftone negatives in your photo engraving plant, and in record time. Screen negatives up to 16" x 20", line negatives up to 17" x 21". Reductions of 5 times with the 8 ft. bed, 8 times with the 12 ft. bed; enlargements of 4 times.

The Consolidated 16" x 20" Process Darkroom Camera is built with all accessories to reproduce indirect color separations from copy and transparencies. The space required to operate the Consolidated 16" x 20" is less than 50% of the space required by any other Darkroom camera. Usually a 6 ft. aisle or a space between 2 pillars, ordinarily wasted, is sufficient, or 2 cameras can fit where one used to. The Camera comes to you all assembled in one unit. All that is necessary is to make an opening 24" x 32", 20" off the floor, level, and plug in the current, as the camera is completely wired ready for use. You save costly construction and electrical installation expense.

Consolidated darkroom controls and stainless steel permanent focusing tapes are conveniently positioned on each side of the camera. Sizes can be scaled and set in a matter of seconds. A 2-way lens turret, and an accurate percentage scale are standard equipment. Special accessories: Luxometer electric timer, electric shutter, diaphragm controls, flash lamps, vacuum back, positive holders, vacuum copyboard, 3-pt. masking and plate bars are available.



Consolidated
PHOTO ENGRAVERS AND LITHOGRAPHERS EQUIPMENT COMPANY
2646 West North Avenue Phone BRunswick 8-4000 Chicago 47, Illinois

Patents

For The GRAPHIC ARTS

Pressroom patents deferred from May 1949 issue.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Printing Presses and Equipment

2,461,691. GRIPPER GAUGE is for use in setting the paper grippers in a cylinder printing press, particularly in running register jobs through printing presses where extreme accuracy is required in registering the material to be printed and where uniform gripping action throughout the width of the sheet is important. A tab is inserted between elements of the paper grippers and secured to a cord associated with the gauge. Gauge is moved from the elements and tension on cord opposes force of a spring associated with a pointer. Rotation of pointer indicates on a scale the pressure between engaging elements of a paper gripper. Invented by Robert G. Lynn, Passaic, N. J. Unassigned. Application March 6, 1946. 2 claims.

2,462,032. MULTICOLOR PRINTING PRESS features a perfecting unit and arranges one color unit with each black unit so that color can be printed on a great many more webs than has previously been possible. By printing color on one side of each web, which this invention makes possible, color appears on every other page. The black and color units are of uniform size and are arranged in stacked relation to save space in the press room. The perfecting unit includes plate and impression cylinders, a folder, including upper formers, and a multi-impression color unit of the same width as the perfecting unit and of the same height as the folder. The color unit has four plate cylinders arranged in vertical relation, and coacting impression cylinders, one of which provides the impression for two of the plate cylinders. One of the plate cylinders is arranged at an angle to a vertical line through the other, the plate and impression cylinders of the color unit being of the same diameter as the corresponding cylinders of the perfecting unit. An ink motion for each plate cylinder is of normal size and has the required number of rollers for newspaper color printing. The ink motion for the angularly disposed plate cylinder is arranged below the center line of the latter and beneath the other plate cylinder which coacts with the common impression cylinder. One part of the ink mechanism is stationary and one part is movable. Web guide rollers direct the web from the perfecting unit throug the color unit to the folder. Invented by Otto R. Wolf, Oak Park, Ill. Assigned to Tribune Co., Chicago, Ill. Application January 1, 1945. 11 claims.

2,462,376. SQUEEGEE SUPPORTING AND GUIDING STRUCTURE. Invention relates to an improved apparatus that uses a stencil printing screen to print color patterns upon flexible webs of textiles, paper, and like material. Apparatus includes a bed for supporting a screen frame and a pair of spools, one carrying a roll of web to be printed, and the other serving as a take-up roll for the web after printing. A squeegee blade runs on a pair of tracks attached to the bed. A pair of guide members are connected to the squeegee and embrace the tracks, but are normally out of contact with them. This allows the entire weight of the squeegee to press on the screen. Marginal spacer strips are secured to a belt that carries the web and allows the freshly printed web to be wound onto the take-up roll without being smudged. Invented by Harry Fleisher, Watertown, Conn., and George H. Tillett, New York, N. Y. Assigned to Roto-Matic Screen Printer, Ltd., New York, N. Y. Application November 7, 1940. 3 claims.

2,462,447. SILK SCREEN PRINTING APPARATUS of the single bed type for small print shops and amateurs, or the double bed type for larger printing jobs has a mechanically operated squeegee instead of a manually operated one. The mechanical operation of the squeegee is very simply accom-

How to recognize a LEADER

In the photo-engraving field, you can spot a leading metal *every time.* Just look on the back of your sheet. If it bears the familiar trade mark of either Zomo Electric Zinc or A-Z Alloy you'll know that you are working with a metal of proved performance.

Each sheet of Zomo Electric Zinc or A-Z Alloy is melted and cast in the electric induction furnace to assure uniformity. Each sheet is precision rolled, Machine-Cut finished, Backoted . . . *and trade marked for your protection and easy identification.*

Remember A-Z Alloy, the tough, quick-etching metal for all long runs and heavy mat work. Zomo Electric Zinc is the recognized standard metal for all work.

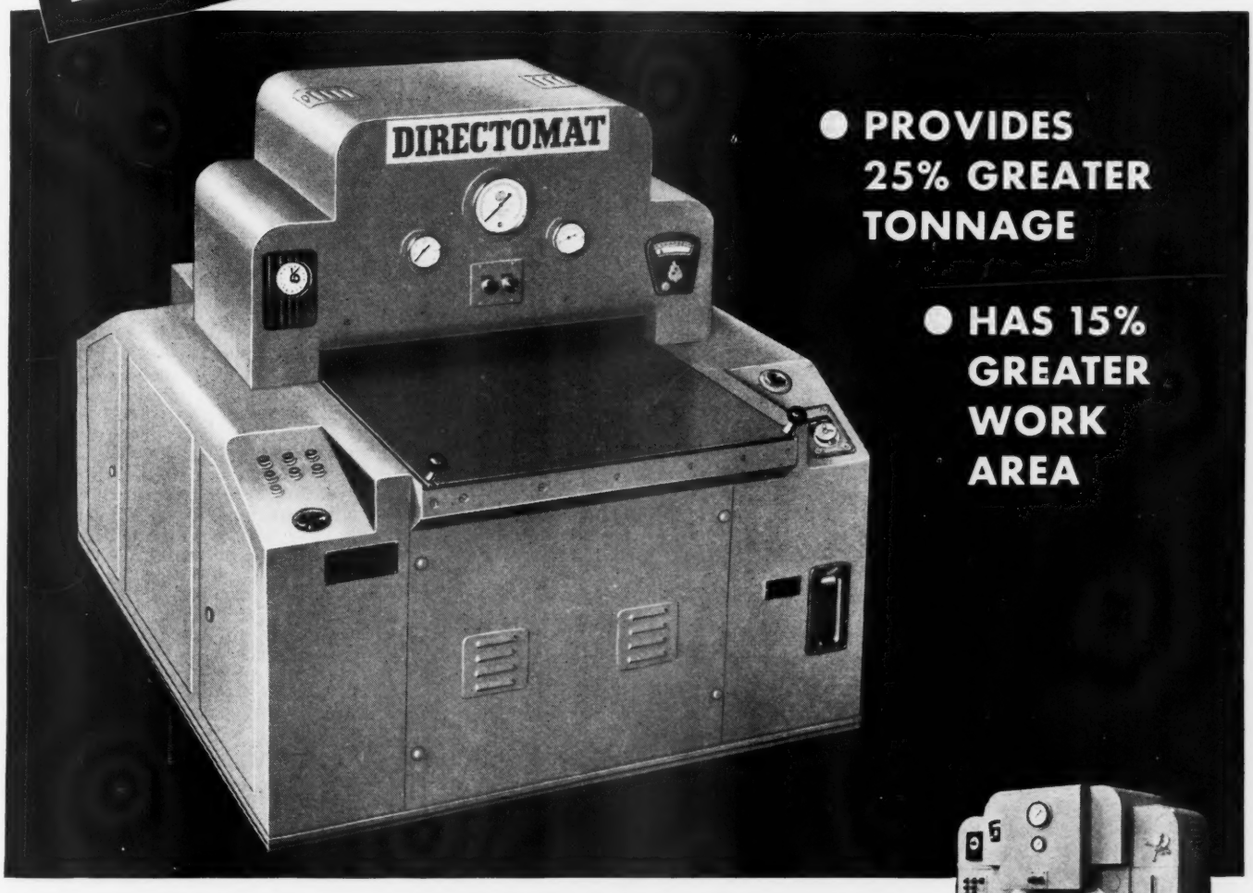
Be sure of stand-out results; insist on these trade marks on the back of every sheet of zinc you use.

Get our FREE Photo-Engraving Zinc Book

It's a 72-page handbook for modern Photo-Engravers. It's crammed with factual information regarding the manufacture of Engravers Zinc . . . the etching of zinc and helpful hints for the Photo-Engraver.

ATLANTIC ZINC WORKS, Inc., 210 Van Brunt St., Brooklyn 31, N. Y.

NEW 1000-Ton Heavy-Duty DIRECTOMAT



Here's the last word in matrix-molding equipment—the new Lake Erie 1000-ton heavy-duty DIRECTOMAT. It is based on Lake Erie's 14 years of experience in building more than 200 standard 800-ton DIRECTOMATS now in daily service.

It literally coasts along on high-tonnage work that would mean continuously operating standard presses at maximum capacity. With 15% greater work area, it permits you to gang patterns and originals so as to obtain higher production and lower costs. Large chases can be accommodated with ease.

All major controls are conveniently located on inclined panels right at the operator's fingertips. Automatic control of molding and drying cycles assures uniformity in each matrix. A new low-silhouette design provides compactness. Complete enclosure excludes dust and dirt . . . yet each part is accessible through hinged access panels.

As in other Lake Erie DIRECTOMATS, the new 1000-ton model can be equipped with a rear work table and controls, work-table level control, vacuum drying system, automatic power-driven work plate, electric or steam-heated platens.

Write for Bulletin 349 which contains complete details on the new 1000-ton DIRECTOMAT . . . and a list of newspaper, commercial, syndicate, and color plants now successfully employing Lake Erie DIRECTOMATS.

● More than 200 printers and publishers are now using DIRECTOMATS such as this 800-ton model. Presses like this are ideal for high-speed production of both black and white and color work without loss of depth and without "double impression."

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

LAKE ERIE ENGINEERING CORP.
568 Woodward Ave., Buffalo 17, N. Y.
Offices in Principal Cities and Foreign Countries

★

Leading manufacturer of
Hydraulic Presses in all sizes and types
STEREOTYPE MOLDING • RUBBER VULCANIZING • METAL WORKING • METAL EXTRUSION • PLASTICS MOLDING PROCESSING • FORGING • SPECIAL PURPOSE

plished by mounting the press bed or beds on an inclined plane and providing trackways so that the squeegee is slidable by gravity on the tracks. At the bottom of the press, the trackway extends upwardly and back over the press bed in practically a level plane. At this point, it joins the trackway which slants over the press bed. The squeegee gains enough momentum on the inclined trackway to swing around the upward bend at the bottom. This automatically raises the squeegee out of wiping contact with the screen. The squeegee also has enough momentum to continue over the top trackway and thus back to its starting point. Invented by Starnes Robert Wellborn, Nashville, Tenn. Unassigned. Application May 17, 1946. 10 claims.

2,462,558. TENSION CONTROL FOR RUNNING WEBS. The speed control is varied by movement of a traverse as well as by a reciprocatory carriage having a roll that engages a bight in the running web. Both the movement of the traverse and the reciprocations of the carriage are controlled by the web under tension acting on the roll and by a power device which exerts a force on the carriage in opposition to that exerted by the web. The mechanism to vary the effectiveness of the speed-control device in response to a progressive change, as well as to fluctuations, in web tension, includes a fluid-actuated operator which may be used on the brake rod of the brake of the unwinding mechanism or with the clutch rod of the slip-friction drive of the winding machine. Such mechanism uses a valve which is divided into a high pressure chamber connected to a source of fluid under pressure and a low pressure chamber connected to the operating device. A time-lag in operating the valve is avoided by operating the valve with a hair trigger action. This is accomplished by allowing a small leak from the high pressure chamber to the low pressure chamber, the effect of which is to constantly activate the valve without affecting the fluid actuated operating device until it is needed. Invented by Joseph S. Scheuermann and Thomas N. Carter, Chicago, Ill. Assigned to Cameron Machine Co., Brooklyn, N. Y. Application June 15, 1944. 4 claims.

2,463,058. FEED AND DELIVERY MECHANISM FOR PRINTING PRESSES. The feed table is adapted to facilitate high-speed, high-production operation of a platen, or Gordon, type of printing press, in connection with printing a plurality of small sheets or envelopes at one time. Table has two side guides and an intermediate guide for positioning two stacks thereon. It can be raised and lowered. A fixed delivery table directly above feed table is divided to receive two stacks of delivered sheets. A cross-shaft horizontally is supported on frame of press and two back stops secured to shaft are spring-urged into erect position respectively to engage the two stacks on feed table. A cam on shaft engages cam means on feed table to swing back stops outwardly when feed table is lowered. Shaft is axially shiftable to disengage cam to permit back stops to return to position. Invented by William C. Rupp, Parma, Ohio. Assigned to The Chandler & Price Co., Cleveland, Ohio. Application July 5, 1947. 10 claims.

2,464,040. DAMPENING OR MOISTING ROLLER is intended for use in wetting the inner surface of the porous or permeable cylindrical wall of a tabulator printing cylinder in which the roller does not roll over the printing surface but supplies moisture only through permeable wall to the non-printing areas of the printing surface. Roller contacts inside the cylinder. Roller is also usable in offset or direct lithographic printing where exterior surface of element is dampened, as by rolling contact with both the printing and bare or damp areas of printing surface. Roller contains liquid and has a permeable cylindrical wall with a shallow helical groove in its outer surface. A moisture-absorptive cover for the wall is in the form of a cord extending helically around cylindrical roller and seated in the groove. Adjacent convolutions of the cord contact each other beyond the groove. Invented by William C. Huebner, New York, N. Y. Unassigned. Application January 23, 1945. 2 claims.

2,464,082. METHOD OF CASTING PRINTING ROLLERS. A method is claimed of casting printing press rollers of the type disclosed in patent 2,270,436, which includes a shaft support, bearings, a tubular core and retaining caps for the bearings. The support, bearings, and caps are removed from the core and to each end of the core a trunnion centering cap is applied to take the place of the retaining caps and to thereby tightly close the ends of the core. Core is concentrically supported

Quietly Efficient.

Quickly Attached.

Lower in Price

•

SEE US AT CHICAGO
June 6, 7, 8 & 9th

Cushman, pioneer type-setting machine power plant, has offset design which permits quick change of pinion and easy adjustment to secure quiet running and long, trouble-free service. The Cushman Motor is lower in price. It can usually be attached to any Linotype or Intertype in thirty minutes or less. After that, you know what **real** power plant satisfaction is. Write for booklet about the

CUSHMAN *Offset* MOTOR

ACE BELTS Maintain steady production drive. Each Ace Belt is guaranteed not to stretch—and to deliver minimum one year's service.

PRECISION TRADE ★ MARK

LINOTYPE PARTS COMPANY

Factory and Main Office SOUTH HACKENSACK, N. J. INCORPORATED Branch Office 1327 BROADWAY, KANSAS CITY 6, MO.

CHICAGO · MINNEAPOLIS · DENVER · NEW YORK · BOSTON

26 YEARS OF WORLD WIDE SERVICE

NEWSPAPER MECHANICAL EXECUTIVES

CALL ON US FOR

Prompt, Courteous and Reliable Service

- NEWSPAPER PRESSES
- STEREOTYPE EQUIPMENT
- PRINTING MACHINERY

•

JOHN GRIFFITHS CO., Inc.

11 WEST 42nd STREET • NEW YORK 18, N.Y.

Longacre 3-4221

GALLEYS AND CABINETS—ALL SIZES

STEEL IMPOSING STONES · PROOF PRESSES · SAW TRIMMERS · SAFETY CHASES · ROUTERS · NUMBERING MACHINES · PAPER DRILLS

FULL PROTECTION

25 Drawers
15"Width, 21¾"Lg., 1⅛"Ht.
Dimensions of Cabinet
38½"Ht., 18⅛"Deep, 24¾"Lg.
Weight 160 lbs.
Special Sizes Made to Order

For Costly CUTS ART WORK and PHOTO ENGRAVINGS

$94.50
F.O.B. Phila.

PROMPT DELIVERIES

This all steel constructed cabinet, finished in smart crackle grey, provides over 9100 cubic inches of storage. Designed exclusively to give you the necessary protection with no excess space for dust or scrap accumulation. Substantially built to carry the heaviest weight load. *A smart practical piece of furniture for shop or office.*

FOSTER MANUFACTURING CORP.

Designers and Builders of Printing Equipment

123-27 N. 13th STREET, PHILADELPHIA 7, PA.

Telephone LOcust 4-2890 **Cable Address Fosterfac**

Known Nationally For Dependability & Permanence

ROTARY
NEWSPAPER PRESSES

- WE SPECIALIZE in the sale of high-grade used Newspaper Printing Equipment, such as Rotary Presses, Flat-Bed Web Perfecting Presses, Color and Magazine Presses.
- MANUFACTURERS' AGENTS for American Steel Chase, Morrison Saws, Directomat, Monomelt, Bowser Ink Systems, Nolan Corp., Hill Paper Cutters, and Every Type of Equipment used in the Composing Room, Press Room, Stereotype Department, Engraving Department, Bindery, Mailing Room of Newspapers and Commercial Printers.

THE

MEZO-STEELE COMPANY

400 W. Madison St. Chicago Daily News Bldg.

CHICAGO 6, ILLINOIS

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

in a mold device by the centering caps for casting an outer facing on the core. A composition coating is cast about the core and caps. Then the centering caps are removed and the shaft, bearings and retaining caps are replaced for mounting in a printing press. Invented by William C. Hart, New York, N. Y. Unassigned. Application December 31, 1946. 2 claims.

2,464,119. MOISTENING APPARATUS is intended for applying moisture to sheets of paper freshly printed with moisture-setting ink of a kind preferred for printing on paper used for packaging foods. A steam pipe has a nozzle on its lower surface for projecting steam upon printed sheet, the steam in pipe being superheated. A hood has a wall extending over the pipe and has its ends extending downwardly alongside the pipe. Hood has a second wall spaced outwardly from the first with ends spaced from ends of first wall. Heat insulating material is between these walls. A third wall spaced from the second forms therewith end passages extending from hood ends to a common exhaust passage connected to the inlet of a fan. Third wall provides for entry of air into end passages. Pipes adjacent inlets heat air and steam drawn thereinto. Invented by Fred C. Dawson, Canton, Mass. Unassigned. Application January 7, 1947. 4 claims.

Increase...
SPEED
and efficiency in your stereo department...
• Fixed and adjustable height models
• 24" x 28½" steel platen, precision ground
• 5" dia. full swivelling ball bearing casters
• Weight 170 lb.
• 4" steel centerless ground post
with PECO Form Tables
Peco form tables are engineered to meet definite needs of the stereotyping department that are not being met by equipment elsewhere available. A few of Peco's outstanding features are listed below:
Appearance—Functionally designed to impart respect and good housekeeping.
Utility—Correctly balanced proportions for ease of operation, and long wear.
Performance—Ruggedly constructed of premium grade materials assuring minimum maintenance.
Economy—Peco Form Tables do not damage or mar wood or rubber tile floors; minimize lost forms due to inaccurate platens.
Crating—Each unit packed in individual crates for maximum protection during shipment. Crate is easily removed and unit can immediately be put in operation.
You will want to write for photographs, complete details, and prices.
PECO
Printing Equipment Corporation
Box 1196 Joliet, Illinois

GPO-PIA Joint Research Bulletins

AS WAS mentioned some time ago in *Printing Equipment Engineer*, a joint cooperative research and operations program is being carried on at the United States Government Printing Office in collaboration with the Printing Industry of America. Results of the various studies undertaken from time to time will be published in bulletin form. It is intended that these reports of tests and studies being made and projected will provide a reference library covering many technical and operational phases of the printing industry.

The Bulletins are available from the U.S. Government Printing Office, Washington 25, D. C. upon receipt of price together with proper designation.

Personnel of the PIA Research Committee which reviews and approves the work is as follows: Frank Pfeiffer, Chairman; William C. Albrecht jr., C. Weston Beck, James R. Brackett, Joseph Chanko, Elliott Donnelley, Stanley C. Hlasta, Russell J. Hogan, Raymond H. Lecraw, John A. McLean, F. G. Rost, Bernard Snyder, Francis E. Street, C. Howard Thomas, William C. Walker and J. Homer Winkler.

Some of the Bulletins have been especially reviewed and approved by a subcommittee composed of men versed in the particular subject under discussion.

Following are the symbols, titles and prices of the Bulletins published so far:

B-1—The Process of Marbling Paper, by Morris S. Kantrowitz and Ernest W. Spencer of GPO. Price 15c.

B-2—Bookbinding Pastes, by Morris S. Kantrowitz and Frederick R. Blaylock. Price, 10c.

B-3—Bindery Glues, by Morris S. Kantrowitz, Ernest W. Spencer, George G. Groome and Frederick R. Blaylock. Price 15c.

B-4—Miscellaneous Bookbinding Adhesives, by Morris S. Kantrowitz and George G. Groome. Price 15c.

B-5—Bookbinding Leather, by Morris S. Kantrowitz and George G. Groome. Price 15c.

B-6—Bronze Stamping Leaf, by Morris S. Kantrowitz and Frederick R. Blaylock. Price 15c.

B-7—Pyroxylin-Treated Book Cloths, by Morris S. Kantrowitz, George G. Groome and Frederick R. Blaylock. Price 15c.

B-8—Control of Warp in Book Covers, by Morris S. Kantrowitz and Frederick R. Blaylock. Price 15c.

C-1—Type Metals, by Morris S. Kantrowitz, Clarence L. Buck and William C. Roddy. Price 15c.

I-1—Ruling Inks and Dyes, by Morris S. Kantrowitz and Robert H. Simmons. Price 10c.

M-1—Detergents for the Printer, by Morris S. Kantrowitz and Earl J. Gosnell. Price 10c.

Kink to Vary the Screen Pattern in Letterpress Color Faking Jobs

IN a previous article, published some time ago, the method for doing letterpress color faking jobs was discussed in detail. In that article it was stated that the same black and white cut was to be used for the several colors, using masks to cut out those portions of the original cut that were not to appear in various colors. This method is, of course, only a makeshift for work done from color process plates. It is used only for short runs where the cost of process color plates would run the cost of the total job entirely too high. For such jobs it works out unusually well and produces a finished job that does offer color even though it is not to be compared with the work that is produced by process color plates.

One objection to the color faking process is that the halftone pattern shows no variation. The importance of this can be realized when it is remembered that the black and white cut is printed first and over it the same cut is printed in part in different colors. That means that where black and any one of the several colors are overprinted, there is the self same screen pattern which somewhat detracts from the color effect. This, of course, does not happen with multi-color process plates because each color cut presents a slightly different screen pattern.

A number of printers use the color faking process for short runs. A few of them, a bit more inventive, have worked out a little kink that gives them a varied screen pattern in the different colors.

The black and white cut is first printed as usual. Then make a mask for each of the colors and proceed as usual with the color faking process with one little addition. Before the first color is printed, the tympan top sheet is lifted up, and a sheet of medium emery cloth or medium sandpaper is put under the top sheet of the tympan. The top sheet is then replaced and the first color printed. Naturally, some of the packing must be removed to compensate for the addition of the sheet of emery cloth or sandpaper. The rough surface of the emery cloth or sandpaper, will break up the original screen pattern into a new screen pattern and thus produce a more faithful color reproduction. Some even change slightly the position of the emery cloth or sandpaper before running a second color, thus obtaining a variation again of the screen pattern.

The use of the emery cloth or sandpaper under the top sheet of the tympan might, because of its hard and uneven surface, tend to injure the screen pattern of the black and white cut, thus making it unsuitable for use afterwards. This objection, however, is not always valid because many jobs done in color by the color faking process are such small runs that it is doubtful whether much damage wouid be done to the black and white plate. True, if the plate were a zinc halftone there would be more liability of damage being done than if it were a copper halftone or an electrotype. This would be especially true if the job being done was one that would not require a later reprinting. For instance, this color faking process is sometimes used on college annuals and such publications where there is a small run and no later edition, certainly none with the same halftone illustrations. In such instances, it is extremely doubtful, if careful makeready was provided, whether the use of the emery cloth or sandpaper in the backing would injure the black and white cut sufficiently to make it noticeable. It must be remembered that the black run is made before either the emery cloth or sandpaper is used thus, before any possibility of danger to the screen pattern is presented. With the black run finished, there could even be some damage done to the screen pattern without disastrous effects on the screen pattern of the several colors that follow.

In cases where the cuts are to be used afterwards, either in later editions of the same job or in other jobs, some printers have worked out a variation of this kink

IN 35 SECONDS a Rouse Band Saw cuts a full galley of slugs **to variable measure**—automatically, accurately. No gauge setting is required—no clamping—no measuring! Slugs feed mechanically **at uniform speed.**

Teamed up with a type-setting machine, a Rouse Band Saw does the work of hours in minutes. It cuts sluglines for all types of composition that require frequent changes of line measure.

MITERING MACHINES
COMPOSING STICKS
SLUG CLIPPERS
BAND SAWS
LEAD AND RULE CUTTERS
TYPE GAUGES

Write today for illustrated folder on this and other Rouse time-saving printers' equipment.

H. B. ROUSE & COMPANY
2214 North Wayne Avenue
Chicago 14, Illinois

For greater accuracy—specify Rouse Composing Sticks. An investment in Rouse equipment pays a handsome profit.

"50 Years of Service to the Printing Industry"

that eliminates the possibility of danger to the black and white cut.

First the black and white cut is printed as usual. Then the necessary masks are made for each color. But instead of using the black and white cut for the running of the colors with their masks, these printers substitute for the black and white cut a tint block of the same size as the original black and white cut. This is a solid tint block—not one with benday effect. By the use of emery cloth or sandpaper as just described, this solid tint block prints with a screen pattern. To be sure, the use of the solid tint block eliminates the details that are present in the original black and white cut. But since those details have already been printed in black, a fairly good color faked job is produced simply by laying down one color over the black but with a screen pattern produced by the emery cloth or sandpaper. The advantage of this variation of the original kink is that should the solid tint block be ruined it can be replaced by another tint block. But the ruining of the tint block is extremely doubtful even if the emery cloth or sandpaper did slightly indent the surface of the tint block. Such indentation would only give to what had been a solid tint block a pseudo screen pattern which, after all, is what the printer is after. In all events, here is a kink with a variation that is both interesting and novel and well worth a trial.

The safest, easiest way to transfer newspaper pages and other heavy forms to letterboards is by use of this Hamilton Page Storage Cabinet. Instead of back-breaking lifting with accompanying risk of accidents, the motor does the work.

Simply push the button to raise or lower cabinet shelf to same height as make-up truck, slide form onto shelf, then push button again to raise or lower shelf to desired opening in cabinet and slide form into cabinet.

Cabinet holds twenty full-size newspaper pages. Hamilton-quality construction throughout. Motor can be plugged into any light circuit outlet thus cabinet can be placed wherever most convenient. Mail coupon below for complete description and price.

Hamilton Manufacturing Company

Two Rivers, Wisconsin

☐ Send us full information and price on the Hamilton Page Storage Cabinet.

☐ Send us free copy of your Composing Room Layout Booklet.

Your Name_____

Company_____

Street Address_____

City_____ Zone_____ State_____

BOOKS
RECEIVED

Silk Screen Printing Process

SILK screen printing is explained to the reader from its fundamentals to advanced uses in the book, *The Silk Screen Printing Process*. The co-authors, J. I. Biegeleisen and E. J. Busenbark prepared a book which would serve as a source of information for commercial users of the process. They also prepared it as an instructive manual for printing and art students. Considering the broad coverage the book gives to the process, both objectives have been accomplished.

The 225-pages of text are supported by 90 illustrations in order to bring to the reader details of silk screen printing. The introductory chapter is devoted to a general description, basic principles and uses of the process.

Silk screen equipment is explained, as are the printing mediums and surfaces. Stencil making, makeready and printing methods compose three other chapters. The finishing, preparing the drawing, estimating and shop management round out a total of 11 chapters on the subject.

Frontispiece for the book is a six color silk screen print from an original drawing by Mr. Busenbark. A subject index increases the value of the text for quick reference and acquaintance with the many terms used by the process.

The Silk Screen Printing Process—By J. I. Biegeleisen and E. J. Busenbark contains 225 pages and measures 6⅛ in. by 9¼ in. Hard bound, navy blue cover has gold stamped lettering. Contains 90 illustrations. Price $4.00 per copy postpaid. May be ordered through *Printing Equipment Engineer*.

114 Check Points on How to Prevent Grievances

GRIEVANCES are the outward manifestations of something wrong underneath. Wise management and mechanical executives, recognizing grievances as symptoms of costly dislocations somewhere along the line, will want to survey all of the factors surrounding the employment situation.

Bleick von Bleicken and Carl Heyel, co-authors of *114 Check Points on How to Prevent Grievances*, have prepared the manual to include the "check points" to provide the means for a comprehensive survey of the employment situation in any plant. The 114 check points are grouped under 10 different categories. For example, 11 check points come under the Job Security category.

It is suggested that these manuals be distributed by management among all mechanical and production executives of a plant to provide answers and comments to these check points. The ulti-

The Composing Room Superintendents' Favorites

Yes, that's just what they are . . . these two BOOTH products are favorites of composing room superintendents in hundreds of daily newspapers and why shouldn't they be?

BOOTH'S ZINK CUT CEMENT

It's the best . . . no other cut cement mounts cuts so quickly or holds them so fast. And here's another use. This cement can be used to solidify type elements for standing ads so that they may be handled as a unit. Here's a cement that's a necessity in all good composing rooms.

Prices: In the United States
75c per tube, $6.00 a dozen tubes

BOOTH'S RUBBER ROLLS

For line-composing machine keyboards . . . use BOOTHS' RUBBER ROLLS and you'll really know how smooth and highly responsive to keyboard cam action a good rubber roll can be. They have high resistance to glaze and maximum cam gripping qualities. Of course, they're of even diameter when applied properly to the shaft.

Prices: $1.45 per pair,
$7.75 per dozen

NOTE OUR NEW ADDRESS

E. A. BOOTH RUBBER CO.
2855 SCARBORO ROAD
Cleveland Heights, Ohio

mate goal is to improve the company's morale and general welfare.

114 Check Points on How to Prevent Grievances—by Bleick von Bleicken and Carl Heyel. Contains 34 pages and cover. Measures 8½ in. by 11 in. Price $1 per copy postpaid. May be ordered from National Foremen's Institute, Inc., Deep River, Conn.

Formula For Supervision

WITH the increasing need for improved supervisory practice and greater harmony between management and labor, *Formula For Supervision* should prove to be a valuable text for mechanical and production executives. The importance of harmonious relationship of a shop foreman, superintendent, employer or executive with his subordinates, cannot be stressed too greatly. It is a wise superior who can make his workers feel that their welfare is as important to the business as it is for a machine to be kept in productive operation.

The author, H. W. Heinrich, Assistant Superintendent of The Travelers Insurance Co., outlines the application of supervisory control to secure safe, efficient work performance. He claims that supervisory prolems of all kinds yield to the application of a single formula, which is: 1. Identify the problem; 2. Find and verify the reason; 3. Select the remedy; and, 4. Apply the remedy.

Mr. Heinrich states there are only 24 kinds of problems—six each in four groups. There are only eight different reasons for the existence of problems. Each reason has its corresponding remedy, but there are only four kinds of remedies. These are explained with corresponding examples throughout each of the three sections of the manual.

A summary and conclusion, bibliography, and index help to round out this valuable contribution to personnel relations.

Formula For Supervision—by H. W. Heinrich contains 95 pages and measures 5½ in. by 8¼ in. Price $1 per copy postpaid. May be ordered from National Foremen's Institute, Inc., Deep River, Conn.

Richard S. Dirkes, new sales representative with Manhattan (N. Y.) branch office, Chemco Photoproducts Co., Inc.

At a recent meeting of the Chicago Photoengravers Technical Society held at the Sheraton Hotel in Chicago, Arthur E. Murphy, Representative of Ideal Roller & Mfg. Co., Inc., delivered an address on *Rollers for the Photoengraving Industry*. In addition to the subject matter, Murphy touched upon the various cleaning solvents best suited for rollers and also mentioned the new 4-color wet

BETTER
FASTER
MORE PROFITABLE PRINTING
5 COLORS PRINTED DRY 5 SECONDS
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
VARIETY OF STOCKS
NO OFFSET NO SMEAR
Depend On The Leader
CHAMPLAIN CO., INC.
88 LLEWELLYN AVE., BLOOMFIELD, N. J.
CHICAGO OFFICE: 7 W. Madison St., Chicago 2, Ill.
Rotogravure at its best
5181

proofing process. Another announcement from the Ideal organization by E. B. Davis, Vice President, concern the assignment of Harrison D. Bergin, Sales Representative, to cover the metropolitan district of New York, N. Y.

Southworth Appoints Dealers

Robert Colomy, Sales Manager for Southworth Machine Co., has announced several new dealers for Southworth Graphic Arts equipment. Nessler and Wagner, Cincinnati, O., will handle a complete line of the Company's machinery. R. W. Hartnett Co., Philadelphia, and Payne and Craig, New York, will handle the envelope press, paper conditioners and humidifiers. Bindery equipment will continue to be sold in the eastern states by E. P. Lawson Co.

E. G. Schreibeis, General Manager of Rutherford Machinery Co., Div. of Sun Chemical Corp., has announced the appointment of A. E. Loveland as Western Sales Manager of the Company's Chicago office. Loveland was previously associated with the Montreal office of General Printing Ink Corp. of Canada, Ltd. as Manager. He started his career in the printing industry as a Monotype operator. Selling printing equipment was his next step which resulted in his becoming Manager for two Montreal firms in this field. He served as a Lieutenant in the Canadian Army and as Secretary-Treasurer for 4¼ terms of the Montreal Craftsmen's Club.

A. E. Loveland, Western Sales Mgr., Rutherford Machinery Co., Div. of Sun Chemical Corp.

"Obviously, my friend, I can jump further than you. Just look at that leg development."

"Pal, I've been a champion for many years, man and boy. Your prattle tickles me."

Well, why all the chatter. Why don't they jump and *compare* results?

That's what we say about photo-engraving metals. Why all the chatter? We want you to *compare* Edes metals with any other photo-engraving metals on the market today. Compare for uniformity and for dependability. It's the results you get that count. See your nearest Edes dealer.

EVERY YEAR IT'S BETTER INVESTIGATE

EDES

PHOTO-ENGRAVING METALS

EDES Engraving Metals: Regular Zinc, Hard Matrix Zinc, Triplemetal, Copper, Brass, Gravure Sheets

THE EDES MANUFACTURING COMPANY, Plymouth, Mass., U.S.A.

Represented by: R. P. BICKFORD, Room 2118, 420 Lexington Ave., New York 17, N. Y. * GEORGE R. KELLER, 210 G St., N. W. Washington, D. C. * W. OLIVER TRIPP COMPANY, 222 Columbus Ave., Boston, Mass. * C. G. DOM SUPPLY COMPANY, 125 East Pearl St., Cincinnati, Ohio * MID-WEST PHOTO ENGRAVERS SUPPLY COMPANY, 520 Clark Ave., St. Louis, Missouri * E. H. WALKER SUPPLY COMPANY, 140 Que St., N. E. Washington, D. C. * 614 East Main St., Richmond, Va. * TEANECK CHEMICAL COMPANY, INC., Teaneck, N. J. * C. G. AMENTA, 5842 North Leonard Ave., Chicago 30, Ill. * ALLAN B. CROKE COMPANY, 451 Atlantic Ave., Boston, Mass. * C. S. ILLINGWORTH, 47 Dakota Ave., Buffalo, N. Y. * J. W. FEINSTEIN, Distributor, 883 Mission St., San Francisco, Cal. * THOMPSON-HAYWARD CHEMICAL COMPANY, 29th & Southwest Blvd., Kansas City, Missouri * G. H. WILEY COMPANY, 507 East Third St., Dayton, Ohio * MARVIS DIST. COMPANY, 144 Walker St., S. W. Atlanta 3, Ga. *

Chromometer

Color Analyzing Machine

THE Chromometer is a color analyzing machine invented by S. M. Rookyard, an experienced etcher of Montreal Can. The device is intended to supply the need for a color chart which gives the percentage, as well as the dot value of each of the primary colors and black, entering into a comparatively unlimited number of complex colors and shades with the least effort.

Those who are familiar with the art of color and dot etching are aware that mental analysis plus the aid of a color chart is limited to comparatively few colors. Invariably, the exact color which the etcher wants to match is not on the chart, so a compensation is made. Not until the plates are proofed does the etcher know exactly how much correction is necessary in order to reproduce the original faithfully.

With this Chromometer, states Mr. Rookyard, it is possible to determine the exact percentage of each of the primary colors (also black) plus the given dot value that enters into 14,640 complex colors and shades.

The speed of operation is claimed to be rapid. By turning the respective dials—yellow, red, blue and black—to their percentage values and by pressing a button, the color is reproduced the same as if it had been proofed on a proof press. It is claimed the discrepancy does not exceed approx. 5% (this is often exceeded due to the human element in proofing a set of plates). This enables the etcher to check his own mental analysis.

It is possible to produce color work by analyzing the pertinent colors, then placing a transparent sheet over the copy and marking the percentage values on the respective color areas, thereby etching as a black and white to the respective dot values as shown by the gray scale on the Chromometer.

Mr. Rookyard explained that the principle of this machine is based on the superposition of extremely thin overlay sheets. To give some idea as to the separation from yellow to blue with the red between, there is no more than 0.00085

Streamline

YOUR DEADLINE

METAL FEEDER
(Positive Mechanical Feed)

▼

PARTS and ACCESSORIES for TYPESETTING MACHINES

▼

***REBUILDING and REPAIR SERVICE**

▼

GRINDING and SPECIAL SERVICES

▼

for the Composing Room

*** We are prepared to rebuild your Linotype, Intertype, Universal Adjustable, Advertising Figure and Recess Molds comparable to new —at *Less Than Half* the cost of new Molds.**

— IMMEDIATE SERVICE —

Write for descriptive literature on our services.

▼

STREAMLINE
METAL FEEDER CO.

Division of H. Wibling Tool & Mfg. Co.

MAIN OFFICE

94 Taylor St. Danbury, Conn.

ALSO

106 Walker St. New York, N. Y.

—KELLOGG *Type-O-Writer* KEYBOARD

(Reg. U. S. Pat. Off.)

Newspapers, book publishers, job printers all say the Kellogg Type-O-Writer Keyboard is truly a "First Aide" in their plants. Just as they buy *extra* machine parts for protection against shut-downs caused by mechanical failure, they buy Type-O-Writer Keyboards, as protection against operator fatigue or illness and costly errors.

Kellogg Type-O-Writer makes line cast composition practically identical with typewriting and just as easy. Only 44 keys do the work of the ninety found on the standard composing machine keyboard. With Type-O-Writer, operator has full use of both hands across the entire face of keyboard. "Left-hand load" is eliminated. Type-O-Writer can be installed on line casting machines in a few minutes with just a screwdriver . . . can be moved from machine to machine in only 60 seconds.

Streamline your own composing room for increased volume today. Write for complete information about Type-O-Writer.

USERS SAY:

"A new operator set 1½ galleys of 8 point solid type per hour after 4 weeks training." "Type-O-Writer is a practical way to get more production from line casting machines." "Anyone who can type can set a commendable record with Type-O-Writer."

IT'S PORTABLE!

Weighs only 25½ pounds. Easily moved.

FOREIGN KEYBOARDS TOO!

Type-O-Writer Keyboards are available in foreign languages as follows:

Spanish	Model 10
German	Model 9
Swedish	Model 8
Polish	Model 7

A Few Good Distributorships Still Available

KELLOGG SWITCHBOARD AND SUPPLY COMPANY
Established 1897
Type-O-Writer

6650 So. Cicero Avenue, Chicago 38, Illinois

inch. This closely approaches the marriage of one color to another in printing inks. In this way, by the use of the Chromometer the operator is able to reproduce colors the same as if they were printed on paper.

Miehle is Host

Miehle Printing Press and Mfg. Co. played host recently to students from the Chicago Lithographic Institute. Included in the tour of the factory and offices was the viewing of the Miehle offset sound movie and operation of a Miehle No. 61 four-color offset press. Talks were given to the group by Paul Twyman, Assistant Sales Manager; R. S. Grau, Chief of the Offset Engineering Staff, and R. Berend, Supervisor of Production Planning.

Plastic Binding Booklet

PLASTIC Binding Corp. has recently published a 32-page booklet in two colors on plastic binding entitled *6 Popular Styles*. The 5¼ in. by 7¾ in. size booklet describes and illustrates the six styles of books for which plastic binding is adapted. Listed are 36 different uses for this type of binding in various advertising, merchandising, publishing and specialty activities. *Printing Equipment Engineer* will gladly take care of your request for copies.

Readers will appreciate hearing about any time-saving device developed in your plant. Write informally in a letter addressed to the editor.

Blueprint of Position

(Continued from Page 84)

Some of the appeals were genuine distress cases of manufacturers who needed "filler work" or "work relief" to tide them over between the cancellation of one war contract and the tooling up for another. But most of the appeals from manufacturers were made at our invitation in order that we might provide items of machinery to meet direct military needs and for essential civilian replacements.

The use of the appeals procedure became an abuse. We had effected it into an authorization procedure—and began acting on about 100 appeals a month. In the 20-month period ending October 1944, we received over 1,800 appeals.

But the delivery controls of L-226 on new machinery, using PD-556 (later WPB-1319) forms, worked well. From then on we knew what the military proposed to buy and we exercised care in screening military cases. At the same time, the Services centralized their own procuring: all Army PD-556's had to come through the Printing Section of the Quartermaster Corps; all Navy PD-556's had to come through the Publications Division of the Executive Office of the Secretary of the Navy. On all Federal Government purchases of printing machinery, L-226 made possible close cooperation with the Congressional Joint Committee on Printing. Under Federal Statute all "Field Printing Plants" had to be authorized by the Committee and all equipment purchases had to be approved by that Committee.

Infrared Drying

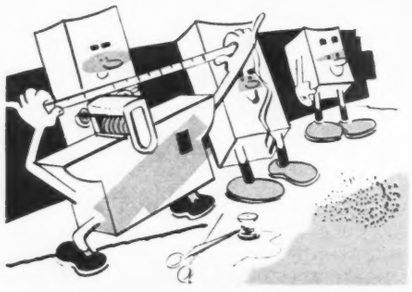
Summary of an address, delivered by Charles Doyle, President of the J. E. Doyle Co., Cleveland, before the Cleveland Club of Printing House Craftsmen, November 1948.

THE speaker discussed infrared heat produced from open glow coil heaters as manufactured by his company for drying ink in the printing industry. Infrared, as defined for the printer, means the transfer of heat from a source operating at a temperature that is high enough that the energy is converted into waves or heat rays. These waves travel with the speed of light and penetrate the air without heating it. Upon striking the paper the waves are instantly transformed into useful heat.

Infrared heat has many and varied

...It takes more than quality plates

MONOMELT SHAVERS Produce UNIFORM Thickness



Quality engravings, electros or stereos need uniform thickness to facilitate makeready and to assure faithful reproduction in printing.

MONOMELT rotary plate shavers turn out smooth, uniform plates shaved with speed and accuracy.

Thus, your plates are properly prepared to meet your standards of perfect printing.

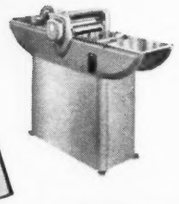
NOW MONOMELT ROTARY SHAVERS OFFER:

SPEED
Helical cutters shave cuts rapidly and evenly.

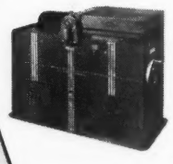
ACCURACY
Every plate is shaved to uniform and exact thickness.

VERSATILITY
Shave them all—stereos, electros, zincs, plastic, stereo and wood base.

Model 401 Rotashaver (for plates up to 12" x 15")



Model 402 Plane-O-Plate (for plates up to 17½" x 22½")



Write today for more information

THE MONOMELT CO., Inc.

1611 POLK STREET N. E. MINNEAPOLIS 13, MINNESOTA

NEW YORK • CHICAGO • BOSTON • ST. LOUIS

CHARLES ENEU Johnson AND COMPANY

GOOD INKS SINCE 1804

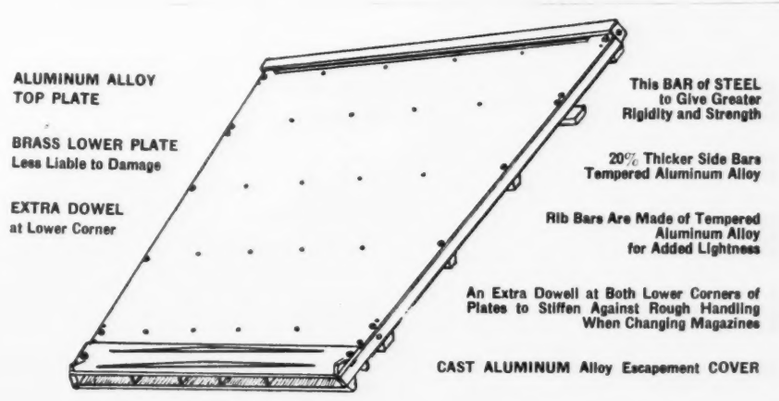
10th and Lombard Streets, Philadelphia, Pa.

• CLEVELAND • DETROIT • BALTIMORE • KANSAS CITY • PITTSBURGH • ATLANTA • DALLAS

Johnson Inks are **GOOD** *inks . . . they enable you to produce excellent printing at a saving of time and money*

period

A GREATLY IMPROVED


ALUMINUM ALLOY TOP PLATE
BRASS LOWER PLATE Less Liable to Damage
EXTRA DOWEL at Lower Corner
This BAR of STEEL to Give Greater Rigidity and Strength
20% Thicker Side Bars Tempered Aluminum Alloy
Rib Bars Are Made of Tempered Aluminum Alloy for Added Lightness
An Extra Dowell at Both Lower Corners of Plates to Stiffen Against Rough Handling When Changing Magazines
CAST ALUMINUM Alloy Escapement COVER

MAGAZINE FOR LINOTYPE MACHINES

Years ago we made magazines of duralumin, an aluminum alloy metal which is light yet gives great strength. These magazines met with great approval, but once in a while became damaged at the entrance. While it is possible to repair it requires greater skill than in case of brass. Most always the damage was confined to the lower plate.

The MONTCO improved design incorporates the best features of previous designs and the resulting magazine is what we believe represents the best possible combination. The top plate is made of duralumin so as to take advantage of its lightness and great strength. The bottom plate is of brass because it meets the peculiar conditions needed at that point. The partitions are made of polished duralumin with a mirror like finish which enables you to locate flat matrices with very little effort.

MONTCO magazines are in daily use throughout the USA and all foreign countries using the standard 90 channel magazines. Our best recommendation is the fact that the "Half and Half" design has been copied by the other competitive manufacturers.

We welcome the opportunity to send Montco magazines on trial. The price for the full length style is only $140 fob Towanda, Pa. Surely with wages at present high levels you cannot afford to have your operators running fonts out and in your present magazines. Order today for a free trial at our expense. Can be purchased through independent supply houses.

MONTGOMERY CO., INC. TOWANDA, PA.
Originator of the Half and Half Magazine

uses, not only in the Graphic Arts, but in other industrial fields as well.

Principle of Infrared

The principle upon which infrared heat operates in the printing industry is the drying effect upon a heat insulating material as opposed to drying upon heat conducting materials. It will heat the ink to a satisfactory drying temperature, but will not adversely affect the paper. In the case of paper, what becomes of the heat? It is conducted off into the body of the paper without changing the physical or chemical condition to any noticeable extent.

It is possible with open glow radiant heat to rise the temperature of the printed area on a sheet without materially heating the paper. In other words, the temperature of the ink can be raised to a satisfactory drying degree without adversely affecting the paper. This seeming phenomena is due to the well-known fact that blacks accept or absorb radiant heat while wites reflect or reject radiant heat.

Infrared drying is by radiation. Air or drafts cannot interfere with the rays reaching the printed surface upon which they are projected. In comparison with drying methods used in other industries, the drying speeds of printed matter are very fast. Comparatively, drying is accomplished in minutes and seconds instead of hours.

The drying of ink by infrared heaters in the printing industry is contrary to the practice employed in the automotive industry. The later applies paints and enamels to sheet metal stock. The body parts to be dried are passed through long tunnels equipped with infrared driers. The concept of this type of heating in the automotive industry is to dry the coating from the bottom up because the metal has to reach the baking temperature of the coating. Then the heat is conducted from the metal to bake the coating from the inside. Since paper is an insulating material, drying by infrared in the printing industry is accomplished from the outside. Thus, the printing industry with the aid of infrared employs penetration, oxidation and evaporation to dry inks in seconds and/or minutes.

Improves Printing Qualities

The surface of the sheet, by being slightly warmed, is also prepared for a clean, sharp impression with a minimum amount of ink. This in itself goes a long way toward reducing smudge. Users who have infrared dryers at both ends of their presses tell us that from their experience they believe the dryer at the feeder end is of at least equal value to the dryer over the delivery.

"Normalizing" Paper

In offset-lith printing, some firms are using infrared open glow coil heaters to "normalize" paper sheets over the feeder or between the feeder and just before the sheet is taken by the grippers. In other words, in the case of sheets with wavy edges or abnormal distortion of the sheet due to improper distribution of moisture content, the infrared heaters will smooth out the sheet. When we refer to changing the moisture content we mean lifting moisture or removing it from the sheet. Proper use of this type of heat will not cause moisture to leave the paper. In offset printing it is more important to feed as smooth a sheet as possible into the press because of the all over contact of the sheet when it passes between the rubber blanket and impression cylinders. In letterpress printing, the all-over smooth condition of the sheet, while it is highly desirable, is not as essential.

Mr. Doyle explained the idea by stating that if one were to deposit a drop of water on a sheet of paper, the water would not remain in globule form but would start to spread over the paper due to absorption. In the same way, infrared heaters cause irregular areas of moisture to spread in the sheet and help to condition the paper before the sheet is passed between the blanket and impression cylinders of the press. He also stated it is obvious that paper thus conditioned would take ink better and more uniformly.

The speaker stated that the F. temperature at the surface of open glow coils is 1230 deg. At the interior of the coils the temperature is approx. 2400 deg. F. It is rather difficult to tell definitely, however, what the temperature is at the surface of the paper opposite the coils upon which the rays are projected. Measuring the temperature of the ink upon the paper is

tape for more type production

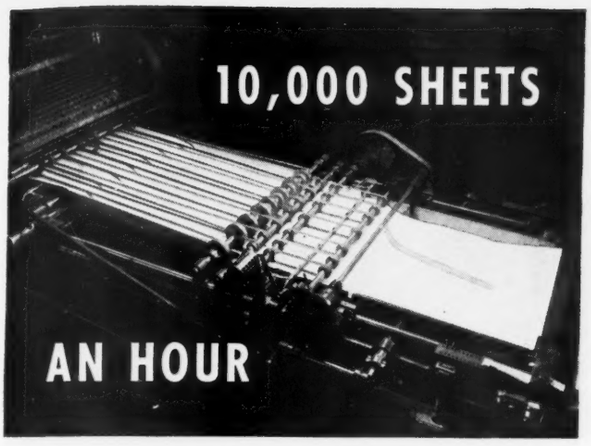
Punch tape on a Teletypesetter Perforator—which operates as simply and easily as a typewriter. Then feed the tape into a Teletypesetter Operating Unit attached to a composing machine, and you'll step up the output of straight matter from that machine as much as 75% to 100%.

Publishers and printers using Teletypesetter for *automatic* operation of composing machines report that they set up to 350 or 400 lines of straight matter per machine hour.

To learn how you can get maximum production from your line-casting machines and greater operating efficiency at less cost—write today to:

TELETYPESETTER CORPORATION
1400 Wrightwood Ave., Chicago 14, Ill.

TELETYPESETTER®



Or a perfect web rewind. Hess & Barker's 4 to 6 color letterpress is precision built and delivers fine high quality color work for little money.

Printers from coast to coast are discovering for themselves aggressive competition can be easily matched on price, quality, quantity and handsome profits made with Hess & Barker's Rotary Letterpress that feeds from a roll and delivers sheets or perfect web rewind.

A few of the different plants now using Hess & Barker's 4 to 6 color Rotary Letterpresses are: canned food label printers, paper drinking cup printers, 4 color process magazine covers, comic book publishers, 4 colors one side, 2 colors other side, 6 colors, 2 sides, once through the press, coffee bag printers, flour, seed, feed bag, etc., printers, office form printers and many others all make a handsome profit on their investment in Hess & Barker's 4 to 6 color press.

Telephone or write for a time convenient for you to see Hess & Barker's press in operation . . . Or if you would like additional descriptive folders or booklets write

●

HESS & BARKER

Printing Press and Equipment Manufacturers

212-22 S. DARIEN ST., PHILADELPHIA 7, PA.

Telephone: PEnnypacker 5-4070

HERE'S A TIMELY TIP ON HOW TO ELIMINATE WRINKLES

Frank (Shorty) Diblik, Pressroom Foreman at Brookes & Sons, of Chicago, has developed this useful trick:

Place strips of gummed paper on the tympan on both sides of the form and as close to the form as possible. Place another strip on top of the first, but step it back about 1/32" from the form. This takes up the slack on both sides and eliminates the possibility of wrinkles forming in the center of the sheet.

and here's a tip on how to eliminate tympan troubles . . .

"don't say 'Tympan' . . . say 'CROMWELL'!"

For 30 years this *unconditionally guaranteed* tympan has helped printers to turn out first quality work speedily and economically. Cromwell Tympan has a hard, uniform surface, high tensile strength and rugged resistance to oil, moisture, ink solvents, heat, cold and atmospheric changes. Cromwell Tympan saves time—saves money.

Make the Tympan Test!
Write today for a free working sample of Cromwell Special Prepared Tympan—the unconditionally guaranteed Tympan. Be sure to specify exact sheet size desired and make of press.

CROMWELL PAPER COMPANY

4801-29 South Whipple Street
Chicago 32, Illinois

one thing and measuring the temperature of the paper area upon which the ink is printed is another.

Infrared heat can be used for drying inks in any printing process, including letterpress (and aniline which is also relief printing), offset-lith, and gravure. Adequate room ventilation must be provided when it is used in aniline and gravure. Another use is in fusing the powder image in the new xerographic process. It is also used for drying in the silk screen process. For specialty printing it can also be used with the newer heat set types of printing ink on rotary, cylinder and platen presses. The inks remain in a liquid or plastic state on rollers, form or plate and paper, but upon being struck by infrared heat they flash-dry immediately. In the case of soft bodied papers and inks, such as in newspaper printing, drying is by speed of penetration and depth of penetration of the ink into the paper. Infrared drying speeds both of these and gives controls over variables in paper, ink, humidity and temperature.

Printing on foil is at the other extreme for it is nonabsorbent. All drying must be on the surface by oxidation or evaporation. For this purpose heat is essential and radiant heat is being used successfully.

Rotary Press Application

It is a well known phenomenon that on rotary presses a layer or "skin" of air follows the paper web through the press On web presses, infrared rays penetrate through this air layer to dry the ink. If a blast of air were to be blown between the paper web and heater, infrared rays would penetrate the air to accomplish drying.

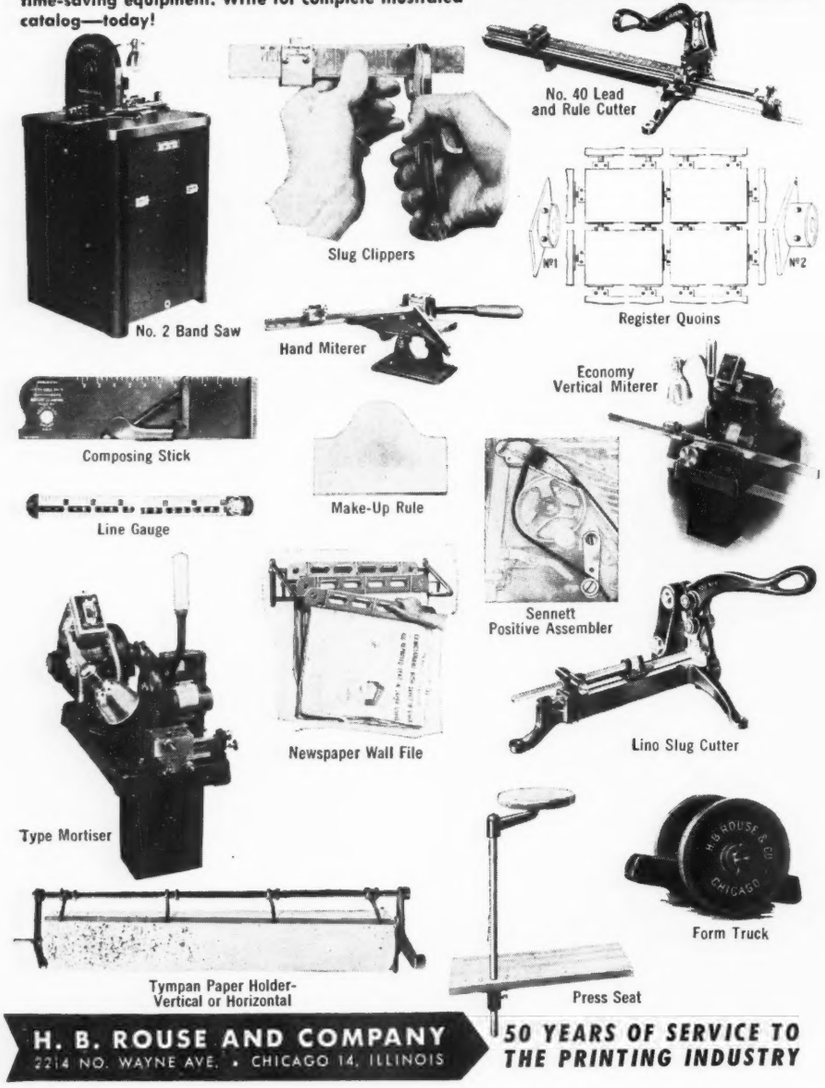
Infrared heat is one of the best means for relief from static electricity. Ink misting on high-speed rotary cylinder letterpress presses is thought to be an electrical phenomenon caused by friction from the rapid speed of the inking rollers and cylinders. This is now being studied intensely, but up to the present time, no one has come up with the correct answer.

Examples of printing on irregular materials were exhibited. These included a potato bag of the mesh type, candy already attached to a sheet of paper, imitation icing patterns of an edible base used by bakers for cake decorations, and a sheet of plastic stock upon which were printed designs for playing cards in brilliant colors.

PRACTICALLY EVERY PRINTING PLANT IN THE WORLD USES ONE OR MORE OF THESE

Rouse PRODUCTS

For absolute accuracy and extra profits, order Rouse time-saving equipment. Write for complete illustrated catalog—today!



H. B. ROUSE AND COMPANY
2214 NO. WAYNE AVE. • CHICAGO 14, ILLINOIS

50 YEARS OF SERVICE TO THE PRINTING INDUSTRY

Moving Day

(Continued from Page 70)

work of the mailing crew easier. Instead of huge quantities of papers being carried about by hand, as is the practice in some mailing rooms, they are placed on raised skids which are moved about by placing under them a small skid dolly. One man can move what it would require six to handle in one trip by hand—and faster.

Milwaukee Bundle Feeders

Also adding to the efficiency of the mailing room, which at present can handle 162,000 papers with a crew of 55 men, will be installation of a new Milwaukee bundle feeder as well as a heavy duty conveyor.

The Loading Dock

The loading dock is of the saw-tooth design, making it possible for trucks to get into loading position without interfering with each other. Trucks are loaded with gravity conveyors leading from chute to truck. These are movable, so that at the start of the loading job the papers are delivered well to the front of the truck and as the loading progresses the conveyor is moved back. Thus much hand-carry is eliminated.

The loading dock area is sufficiently large so that equipment and supplies may be delivered at the same time loading is being carried on without one operation tying up the other. This was an important feature during the time new equipment was being installed. The dock is equipped with electrically controlled overhead doors to shut out cold winter air.

Incidentally, it was realized at the outset that plenty of room would be required to get the new equipment in the new quarters, so a huge opening was made in the rear pressroom wall to provide easy access to the interior from the

(Continued on Page 110)

Setting the Pace . . . Always

Since 1915, we have been constantly seeking ways to improve our product . . . adopting new techniques . . . replacing obsolete equipment with new . . . testing for ways to step up quality . . . always setting the pace for service and dependability to meet the rigid demands for perfect dry mat quality.

The result—the best printing dry mat on the market. A strong statement, but one that can be proved through free trial samples—sent upon request.

And you'll find all Wood Flong representatives skilled in the art of stereotyping. Their background and long experience are at your disposal.

Contact our representatives at the convention

WOOD FLONG CORPORATION *Oldest In The Country*

WOOD DRY MATS — ALWAYS UNIFORM

HOOSICK FALLS • NEW YORK *First In The Field*

NEW YORK CITY OFFICE: 551 FIFTH AVENUE • NEW YORK 17, NEW YORK

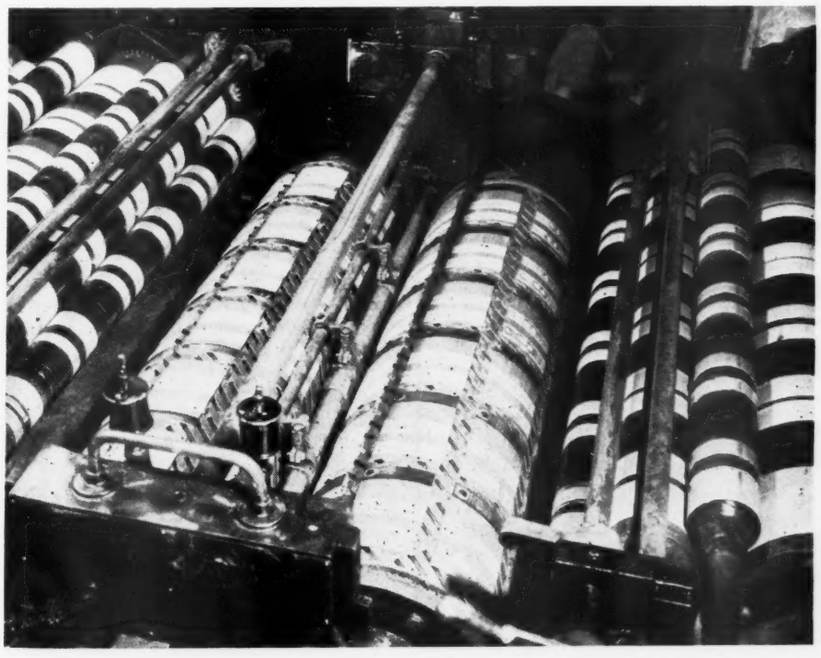
22 Colors—4 Impressions

Printing 22 colors in four impressions on a high speed rotary press by using split fountains is the recent accomplishment of The Wickersham Press, Inc., of New York, N. Y. The job was a cosmetic color chart for Fuller Brush Co. containing the varied tints and tones of lipstick, make-up, rouge, nail polish and mascara.

A heavy-duty 2-color Cottrell sheet fed rotary press was selected for the job. Each fountain was split by dividers into 18 sections, containing three colors duplicated six times across the press. This formation was repeated on the opposite fountain which carried 18 different colors, making an imposing total of 36.

A battery of 18 rollers kept the colors evenly distributed from the two fountains. These were cut to the exact width of the divided fountain, lined up to feed these rollers.

Inks were specially mixed by the manufacturer to match original samples. The rate of production was approx. 3000 36 in. by 48 in. sheets per hour. The maximum printing use was made of each sheet out of which 36 folders were cut.



Top view of heavy-duty 2-color Cottrell rotary press showing split rollers and 6 sets of electros on each press. Such an arrangement permitted 22 colors to be printed in four impressions at The Wickersham Press, New York, N. Y.

Recession Not Feared

(Abstracted from an article appearing in *The Christian Science Monitor* by Tully Nettleton and Kimmis Hendrick, Staff Writers.)

PRINTING, with its associated arts of engraving, offset-lithography, and so forth, forms one area of industry which has less to fear from a moderate business recession than some other lines, those acquainted with the trade point out. The trend from a seller's to a buyer's market and to keener competition acts to increase the demand for certain types of printing used as selling aids, including promotional literature, direct mail matter, catalogs, price books and dealer displays.

Moving Day

(Continued from Page 108)

loading dock area. A monorail was also installed in the pressroom to permit easy block and tackle handling of heavy equipment.

Pressroom Rearrangement

Pressroom rearrangement to make room for two Wood four-cylinder color press units in line was a major engineering feat accomplished speedily and with no break in pressroom schedules. One 22 T. press unit was pulled back 25 ft. in 45 min. with rollers and winch. One press unit with superstructure and double folder, a total of 42 T., was put on rollers and also moved 25 ft. in 10 hrs. without dissembling any part of the equipment. This was done with 35 T. Norton jacks, borrowed for the job from the Northern Pacific railroad repair shops. Later another 22 T. press unit was moved out of line and back in from 2 p.m. in the afternoon to 9 p.m. at night. This was done in the course of installing the new color units. At another stage two units, superstructure and double folders with aerials was moved intact, a total of 64 T. The move of 77 in. was made in six hours with the Norton jacks.

The color units, one of which is in operation, are being placed, each in front of a folder, for proper color position and selection. The second unit will be installed shortly. They are the second installations of their type in the country, the other being in operation at the St. Louis *Post-Dispatch*. Powering the battery of giant presses are two 200 h.p. electric motor drives which, like the other heavy equipment, came into the pressroom through the "hole in the wall" and required only one day for installation. Other features of the pressroom include Wood pneumatic pasters and tension control equipment operated through a solenoid which maintains constant regulation of tension in relation to press speed, thus greatly reducing time loss due to paper breaks and makes possible operation of pasters at 30,000 r.p.m., as compared to the old speed of only 5000 r.p.m.

Stereotype Dept.

The stereotyping department has derived great benefit from the reorganization and expansion. It, like other departments in the plant, has daylight illumination from an excellent fluorescent lighting system. Occupying a space about 40 ft. by 70 ft., the department is lighted by 117 four-foot fluorescent tubes. The department has received a new color plate casting box and pot, a new heavy duty Wood automatic shaver and other equipment for complete separate color and black and white divisions. There will be a new Wood pre-registering device which will accurately register color plates and the stereotype job department will have as part of its equipment a new Hoe saw and trimmer as well as a Goss heavy duty Giant molding machine. Labor-saving is carried out here as in other departments. As an instance, plates are moved to the pressroom with a gravity conveyor.

Under the stereotype room are three carburetors for the Kemp pots and a vacuum machine for the casting box.

Engraving Room

Many more changes are being made and will be made before the current program of expansion and reorganization is complete. The engraving room, now occupying rather cramped quarters it shares with the composing room on the third floor of the main building, will be moved to the second floor, where working space will be doubled. New equipment, when that move is made shortly, will include a Chemco infra-red burning-in oven and cooler, Chemco cold grid printing frame, Niagara guillotine and numerous sinks and work-benches made locally from stainless steel.

Composing Room

The composing room will expand into the 34 ft. by 46 ft. space now occupied by the engraving department and will receive two Model G, four side, four main units and two Model F 4-4s, Intertypes, besides new saws, mitering machines, benches and two Sta-hi form storage racks. The advertising control room, now on the first floor, will be moved to the composing room floor for

FOR SALE
DUPLEX PRESS

THREE METROPOLITAN UNITS
WITH DOUBLE FOLDER

ONLY 14 YEARS OLD

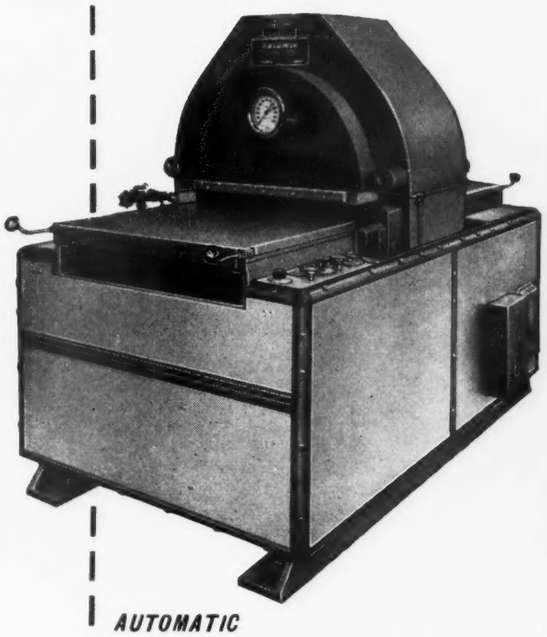
- **Perfect Running Condition**
- **23 9/16" Page Cut-Off**
- **Speed 35,000 to 40,000 Copies Per Hour, Straight**
- **Cline Westinghouse Unit Type Motors, Reels and Tension**
- **Contact L. J. Chase, Prod. Mgr. The St. Louis Star-Times, for information**

May be Inspected in Operation in the Plant of the

STAR-TIMES PUBLISHING CO.

ST. LOUIS 1, MO.

STEREOTEX



AUTOMATIC

MATRIX MOLDING AND SPACE-PACKING PRESS

FOR BLACK AND WHITE NEWSPAPER MATS

HOLDS DEPTH and DETAIL

The Stereotex press molds and **holds** the full depth and the most minute detail of the original form, because the mat is held under pressure for a longer time.

UNIFORM THICKNESS

The Stereotex molds the mat to a more uniform thickness . . . than is possible by the conventional method. This is done by **two** predetermined successive pressure cycles, one **with** and one **without** blankets; the second cycle bonds the Stereotex backing paper to the matrix and, at the same time, molds solids and large type to the same thickness as body type in the mat. It produces a flat back by filling in every non-printing space, regardless of size, and provides perfect bolsters over the entire mat area.

SAVES TIME and SPACE

The Stereotex press has the production capacity of **two** modern mat rollers, **but only takes the space of one.** Molding and packing cycles take only **10 seconds** each, with an interval of about 7 seconds to remove the blankets and place the Stereotex backing paper on the back of the matrix adhering to the form.

By thus eliminating the laborious and inaccurate manual space-packing operation, the Stereotex press and process saves precious minutes at a time when every second counts

ELIMINATES DISTORTION

The Stereotex method eliminates stretch, waves and concaves in the mat and can produce the same shrinkage as is obtained by roller molding. Before drying, the mat is exactly the same size as the form and is "flat as a pancake."

SAVES THE TYPE

It saves the type because it requires less pressure per square inch than a matrix roller to produce the desired depth and sharpness in the mat.

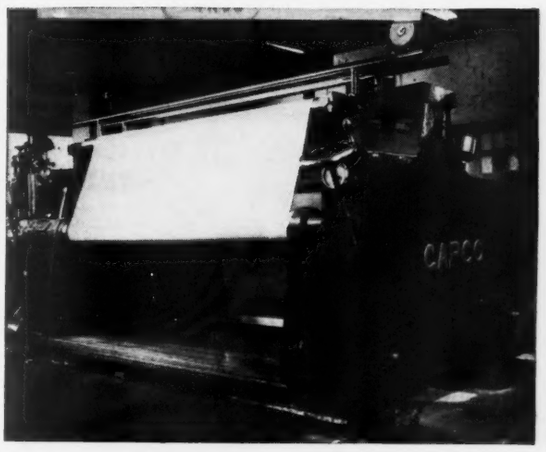
SEE US AT CHICAGO . . . BOOTH 73

STEREOTEX MACHINERY CO.

STAMFORD, CONNECTICUT

It's New!

CAPCO



REWINDER

This new improved CAPCO REWINDER answers the need for an efficient, economical means of unwinding or rewinding rolls of paper. It's the type of rewinder that pressroom superintendents have always wanted. The CAPCO REWINDER has a splicing car which trims and overlaps top and bottom sheets to be pasted in one operation with adhesive tape in place.

The CAPCO REWINDER is admirably suited for rewinding damaged paper rolls. Provision is made for cutting these rolls to three-quarter size. Three-quarter rolls can be cut to one-half.

Other features are the efficient construction that brings the roll closer to the floor to minimize lifting or lowering. A means of reversing rewound rolls and an automatic tension floating roller permit the roll to be wound with an even tension regardless of size.

CAPCO REWINDER Specifications:

Max. paper width . . . . . 66½ in.
Length of machine . . . . . 8 ft., 8 in.
Width of machine . . . . . 8 ft., 8 in.
Height of machine . . . . . 4 ft., 1½ in.

WRITE TODAY FOR ILLUSTRATED LITERATURE AND COMPLETE DETAILS

CAPITAL TOOL & MFG. CO.

3801 Bunker Hill Road, Brentwood, Md.

better coordination and distribution of proofs.

Ink Tanks

Various other interesting features of the mechanical department catch the eye as one passes through it. Ink, taken in through a pipe at the loading dock area, is carried to the big tanks which hold 50,000 lbs., sufficient for 15 days. Also in the ink room are auxiliary tanks holding 1000 gallons and twin ink agitators so installed that the ink can flow back to the storage tanks by gravity.

A new air compressor has been installed to take care of the mailing room load and there is also a 10 by 10 compressor to handle main building equipment.

Cooperative Effort

Separation of the mechanical department from the main building presented a problem in mat transportation for a time. Now in the stereotype room is the terminal of a mat conveyor which brings the mats from the third floor of the main building, across the street. That conveyor is the invention of Max Kueppers, head machinist, who also had charge of rebuilding the insertion machine heads and had a large part in the pressroom moving and other changes about the plant, as did Joseph Mayen, mailing room foreman; Lawrence Kameron, stereotype foreman; Charles Bertram, press foreman; Bob Lee, composing room foreman and George Marsh, engraving foreman.

Watching over and planning the whole general operation and sharing with the above men their headaches as well as their elation when things "worked," was Al Rosene, mechanical superintendent for Northwest Publications, Inc., which publishes the *Pioneer Press* and *Dispatch*.

ANPA Research

(Continued from Page 58)

"the Research Department's aims are typesetting machines that will cast lines of type with twice the speed they now can . . . and where the only limit is the speed of the typist. . . . The people who build these machines and other machines we are using are now definitely aware of our needs . . . and are aiming their results at our problems."

Among those evincing interest and cooperation in the ANPA Mechanical Research program, Mr. Baumrucker mentioned specifically the press manufacturers, Mergenthaler Linotype Co., American Type Founders, Eastman Kodak Co., and Dow Chemical Co.

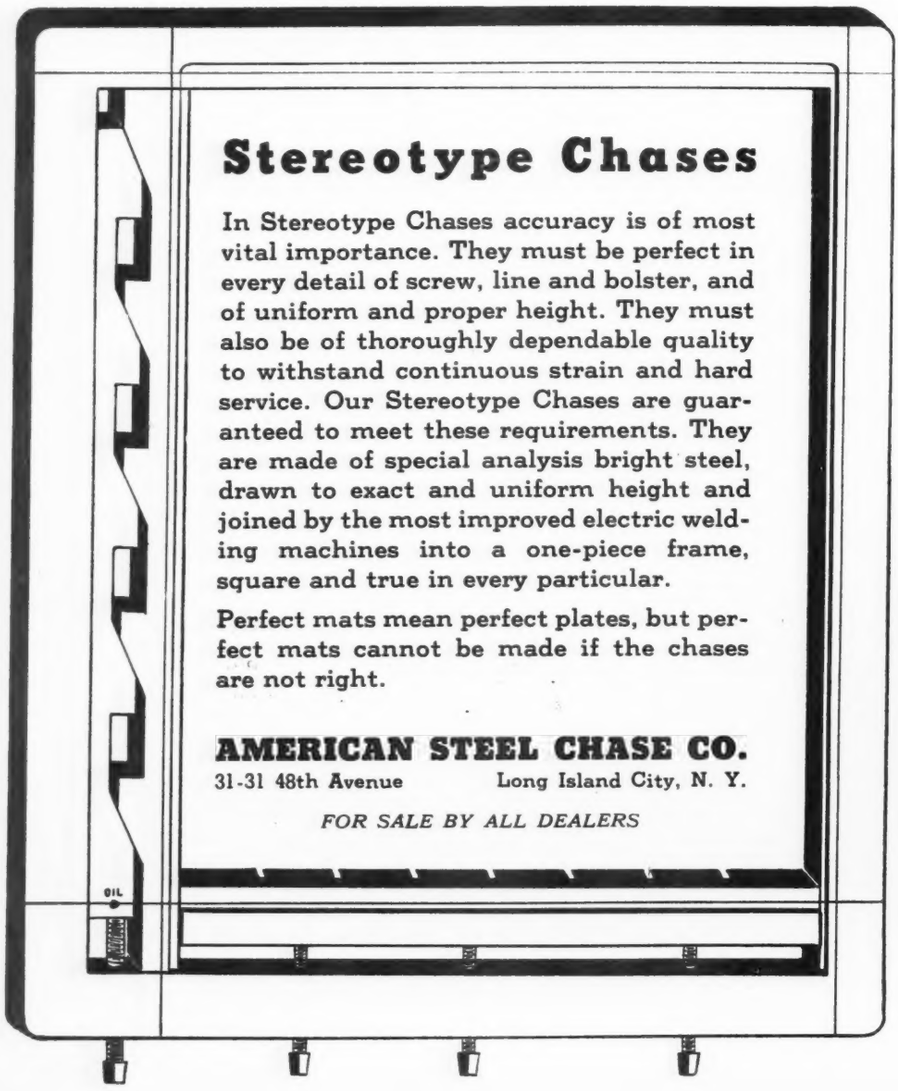
Ahead of Schedule

Chairman Baumrucker pointed out specifically that in the Research Committee's report it is claimed the Committee is way ahead of schedule in the ANPA Research Program. "Our director," said he, "has been on the job for 1½ years, and if we allow about one year for getting acquainted, it is true that we have had the active program going for only seven months. . . . We don't care who finds the solution to a problem, or makes an invention. All we want is to see that it is done and made available to publishers. That we want to help, and not to steal ideas, is almost hard for manufacturers to comprehend at first, but they are quick to see the point. Our benefits will come out of the use of the equipment—not its sale—so they (the manufacturers) are eager to go along with us."

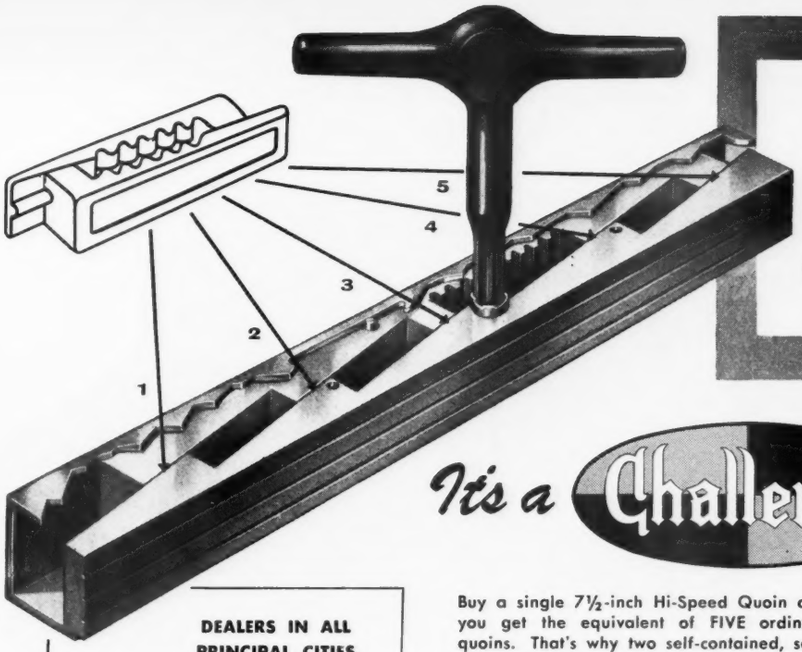
Director Flint Reports

ANPA Research Director C. M. Flint presented his report, *The First Year of Research*, at the convention of the American Newspaper Publishers Assoc., New York in April 1948. He treated, rather exhaustively, progress in organization of the program to be undertaken since he has headed the ANPA research activity. The following comments are abstracted from his report:

"I am pleased to tell you," he said,


Stereotype Chases
In Stereotype Chases accuracy is of most vital importance. They must be perfect in every detail of screw, line and bolster, and of uniform and proper height. They must also be of thoroughly dependable quality to withstand continuous strain and hard service. Our Stereotype Chases are guaranteed to meet these requirements. They are made of special analysis bright steel, drawn to exact and uniform height and joined by the most improved electric welding machines into a one-piece frame, square and true in every particular.
Perfect mats mean perfect plates, but perfect mats cannot be made if the chases are not right.
AMERICAN STEEL CHASE CO.
31-31 48th Avenue Long Island City, N. Y.
FOR SALE BY ALL DEALERS
OIL

BETTER
FASTER
MORE PROFITABLE PRINTING
75,000 FOLDING CARTON BLANKS PER HOUR!
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
INSTANT DRYING INK
VARNISH IN-LINE
Depend On The Leader
CHAMPLAIN CO., INC.
88 LLEWELLYN AVE., BLOOMFIELD, N. J.
CHICAGO OFFICE: 7 W. Madison St., Chicago 2, Ill.
Rotogravure at its best
5172



BUY ONE-GET FIVE!

It's a Challenge HI-SPEED QUOIN

DEALERS IN ALL PRINCIPAL CITIES

Here's a table of equivalents measuring the efficiency of Hi-Speed Quoins in terms of ordinary quoins.

SIZE	HI-SPEED		ORDINARY
3 "	1	equals	2
4½"	1	equals	3
6 "	1	equals	4
7½"	1	equals	5
9 "	1	equals	6
10½"	1	equals	7
12 "	1	equals	8

Buy a single 7½-inch Hi-Speed Quoin and you get the equivalent of FIVE ordinary quoins. That's why two self-contained, self-locking Hi-Speed Quoins can do the work of four to eight ordinary quoins with savings in time up to 80%.

And, Challenge Hi-Speed Quoins result in better, safer lock-ups. They eliminate slippage, reglets, work-ups. Expansion is DIRECT, a point at a time, with an easy-to-read indicator that lets you unlock and relock a form and still hold register.

For fast, safe, accurate, press or foundry form lock-ups, order Challenge Hi-Speed Quoins from your dealer today! All 7 sizes now available with new ball type lock and improved register indicator.

THE CHALLENGE MACHINERY COMPANY

Main Office and Factories: Grand Haven, Michigan

618 ***"Over 50 Years in Service of the Graphic Arts"***

IF YOU CHOOSE ME

I will serve you with products of the leading manufacturers, for I represent the division of new equipment, for the M. L. Abrams Company and offer you the best in the following items:

Casting Boxes
Chases
Composing Sticks
Galley Cabinets
Imposing Tables
Make Up Turtles
Metal Furnaces
Monomelts
Newspaper Base
Paper Cutters
Paper Drills
Proof Presses
Routers
Saw Trimmers
Shavers
Spaceband Cleaners
Type (Baltimore)
Type Cabinets

WRITE OR PHONE TODAY FOR FULL INFORMATION

THE M. L. ABRAMS COMPANY
NEW AND REMANUFACTURED PRINTING MACHINERY
1639 SUPERIOR AVENUE • CLEVELAND 14, OHIO

IF YOU CHOOSE ME

I will serve you with "guaranteed" remanufactured equipment, for I represent the used equipment division of the M. L. Abrams Company and offer you the following remanufactured machines:

COMPOSING ROOM

Vandercook Power Proof Press, form size 24 x 24
Potter Proof Press, 16 x 25 with feed board, guides, inker
Miller Universal Saw
Hacker Plate Gauge
39 x 65 Iron Top Imposing Table with galley space
Ludlow Cabinet with 20 drawers
Amsco Vertical Rotary Miterer, 24 pt. capacity
Gas Pots for Linotype

PAPER CUTTERS

30½" Challenge Lever Cutter. Solid base
34½" Chandler & Price Power Cutter
40" Seybold Automatic
38" Dexter Automatic

STEREOTYPE

Hoe Mat Roller, 30 x 45 for wet or dry mats
Daniels Planer, 18 x 20
Ostrander Seymour full page flat shaver
Hammond Easy Kaster. Six column
Wesel Rougher 19 x 32
Wesel Curved Plate Caster
Wesel Stereo Saw
Rouse Band Saw. Cuts full galley of slugs

BINDERY

Model B Cleveland with Swart Continuous Feeder
38 x 50 Dexter Folder. Makes 3 right angles
No. 4 Boston Stitcher
Wright Multiple Drill
Portland Power Punch

WRITE OR PHONE TODAY FOR FULL INFORMATION

THE M. L. ABRAMS COMPANY
NEW AND REMANUFACTURED PRINTING MACHINERY
1639 SUPERIOR AVENUE • CLEVELAND 14, OHIO

"that by any measure of comparison our progress is far ahead of schedule."

Planning Research Program

"In setting up the program we were dedicated to the idea that it would be primarily a cooperative research program, and it was decided that our greatest efforts would be concentrated to that end. Our philosophy concerning this type of program is simple. In a tightly knit business such as ours, supplier and user are equally dependent, one upon the other for a profitable operation. The time has come when the manufacturers and suppliers to our business must recognize that the newspapers need help in the form of less expensive and more efficient equipment.

"We cannot expect our supplies to do the job alone. Some of our requirements must be changed and some of our problems must be more fully understood before much can be accomplished. We cannot continue to adhere to traditions and craftsmanship methods of many years standing and expect our suppliers to bail us out. We must be willing to accept some changes in method provided such changes will reduce costs.

Laying Out Program

"As a result of an intensive survey, a program was laid out designed to keep operations as practical and down-to-earth as possible. The specific activities to be considered under this program were:

"(1) An investigation of the possibilities of eliminating the packing of mats.

"(2) The development of an automatic router.

"(3) A study of the mechanical operation of the newspaper production business to determine whether or not process controls, as used in other businesses, could be applied to our processes.

"(4) A study of the physical or chemical factors involved in depositing ink on paper.

"(5) A study of the possibilities of printing from original plates instead of stereos.

"(6) The establishment of a technical service program to members.

"(7) The establishment of a research laboratory.

Accomplishment

"Research on the automatic router is substantially completed. Patent pro-

Expert Opinions

(Abstracted from a report by Floyd C. Larson, of the discussion *How It's Done By Offset*, at the February 1949 meeting of the Chicago Craftsmen's Club.)

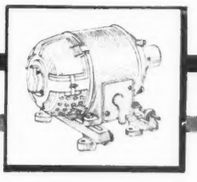
IN overprinting letterpress inks Louis Hrabeck of the Sleight Metallic Ink Co., Chicago, opined that difficulty in getting good results here was due to the fact that the printing surface had lost its affinity for ink and was scummy. John Skahill of Roberts & Porter, New York, a member of a panel of litho experts along with Hrabeck, said that in photographing electros directly for offset copy some satisfactory results had been achieved through chalking of the nonprinting areas.

BETTER
FASTER
MORE PROFITABLE PRINTING
18,000 MULTICOLOR SHEETS PER HOUR!
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
EASY TO OPERATE
NO MAKEREADY
Depend On The Leader
CHAMPLAIN CO., INC.
88 LLEWELLYN AVE., BLOOMFIELD, N. J.
CHICAGO OFFICE: 7 W. Madison St., Chicago 2, Ill.
Rotogravure at its best
5177

35
YEARS EXPERIENCE
Designing
Newspaper & Printing Plants
New Plants • Remodeling
and Production Studies
• Surveys and Reports
• Material Handling

MORTON L. PEREIRA
& ASSOCIATES
Engineers and Architects
100 West Monroe Building Chicago 3, Ill.

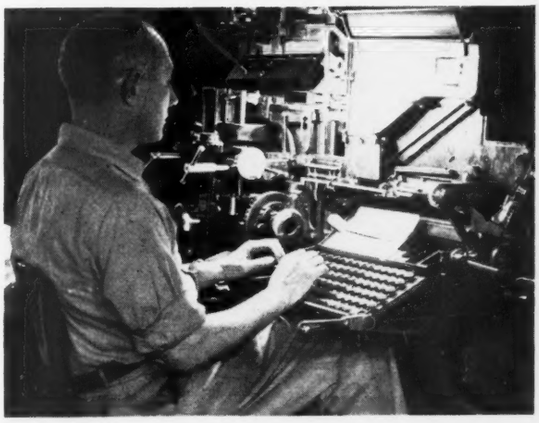
KIMBLE
CUSTOM-BUILT MOTORS



FINE CUSTOM-BUILT MOTORS
FOR THE GRAPHIC ARTS
INDUSTRY SINCE 1904

KIMBLE ELECTRIC
Division of Miehle Printing Press & Mfg. Co.
2856 MT. PLEASANT STREET
BURLINGTON, IOWA
DISTRIBUTED BY: AMERICAN
TYPE FOUNDERS

TWO TIRED EYES MAKE ONE TIRED OPERATOR



JUST THINK!

- ★ *No Heat!*
- ★ *No Glare!*
- ★ *Economical!*
- ★ *Demountable!*
- ★ *Better Visibility!*

Over 200 million Fluorescent tubes are now in daily use! . . Such universal acceptance of fluorescent as the best in modern lighting should make you realize that you owe it to your operators and yourself to install the highly efficient Superior Fluorescent Lights. The Superior Light Fixture has been designed and is manufactured especially for typesetting machines. Easily applied.

Operators need the best light and the best light is fluorescent.

Two tube 8 watt fixture complete $24.50
Single tube 15 watt fixture complete $20.00

Direct current slightly more. Tubes can be supplied in daylight, whitelight or 4500° white. Order now or send for literature.

SUPERIOR FIXTURE COMPANY
121 W. 67th Terrace Kansas City 5, Missouri

Introducing
A NEW HARD CORK MOULDING BLANKET!

After years of constant tests and use, we are now proud to introduce the new hard STER-O-CORK blanket.

Send us a trial order and convince yourself of its superior performance.

COYNE AND PADDOCK INC.
4009 21ST STREET
LONG ISLAND CITY 1, N.Y.

NATION WIDE . . .

— THE —

INFRA-MATIC DRIER

is the criterion in uniform high shrinkage control

IT IS

SIMPLE TO OPERATE

FULL AUTOMATIC

ELECTRONICALLY TIMED

ECONOMICAL

These machines are built in two models for 1 inch shrinkage.
The standard model takes 75 seconds to pre-shrink a mat.
The high speed model takes 50 seconds to pre-shrink a mat.

Write for Details

THE INFRA-MATIC PRODUCTS CO.
BALTIMORE NEWS POST BUILDING
BALTIMORE 3, MD.

100% Automatic
SLUG SAWING WITH
MOHR SAW

IT'S EASIER QUICKER CHEAPER

Use the Mohr Saw for 100% automatic, completely accurate slug sawing. You save time . . . save metal . . . save money. The measure-control dial provides instant precise adjustment of slug length. Slugs are cut to any desired length as they are ejected from the linecasting machine.

Adopt the method favored by shops everywhere for sawing odd-measure machine composition—speed work by using Mohr Saws!

MOHR LINO-SAW COMPANY
126 N. Union Avenue Chicago 6, Ill.

tection is now being applied for. As presently conceived, the machine will be capable of routing seven 24 in. by 18 in. plates per hr. and one man can operate or attend at least four machines.

"Plates routed on this machine need to be etched only 0.008 in. to 0.012 in., which means a saving of one powder operation and one acid bite. Plates of this nature have been routed on the machine, processed in the normal manner and printed with entirely satisfactory results. We still have minor investigations to make and there are minor modifications to be made in the machine.

Printing from Original Plates

"We are actively engaged in a study of the possibilities of printing from original plates instead of stereotypes. This study is one of our most active studies and one that is perhaps promising of the greatest final result. In considering the use of original plates on the press we are, of course, dedicated to the use of already existing press equipment. This means, of course, relief plate printing. If we can successfully and economically print from original plates, all of the loss in detail involved in our present process of getting from the locked up chase to the plate on the press will be eliminated.

Process Geared to the Smaller Paper

"Today it is accepted practice by all newspapers, large and small, to cast slug lines of type, assemble them with cuts and ad material, roll mats and cast the plates. It's the only way we know of to make up our plates for the press. In the metropolitan papers, many duplicate plates are cast from the same mat and the preparation costs are spread over many units. The smaller paper which casts only one or two plates is carrying a cost per plate which is out of all proportion with its requirements.

"It is my opinion that there should be a process and equipment which is geared to their requirements. Out of this study, of course, will come developments which will be of interest to every newspaper.

"In considering our studies in printing from original plates, we cannot neglect the possibilities of using the offset or dry offset. These studies at the present time are admittedly aimed at the requirements of the smaller newspaper but, as I stated before, out of these studies will come developments which will be of interest to all newspapers. The first step in making equipment available for this type of process was announced by the Intertype Corporation with the introduction of the Fotosetter.

Co-operating Companies

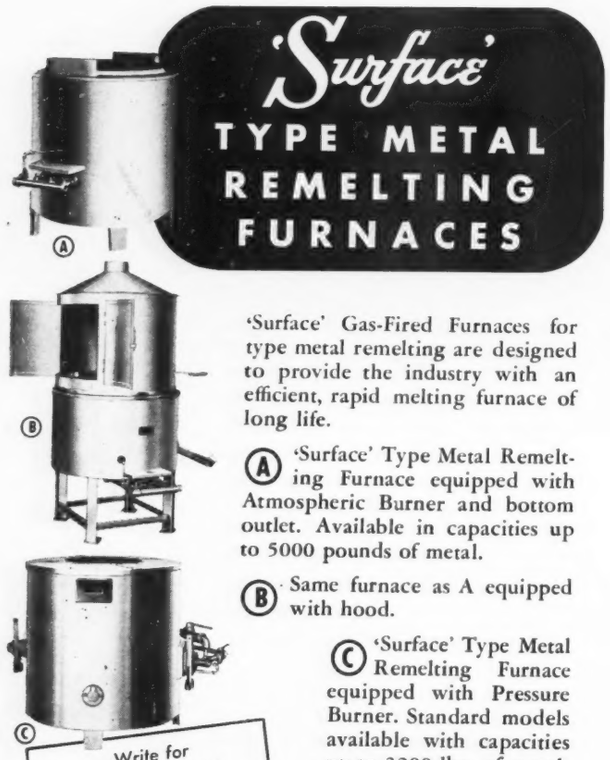
"Our efforts to stimulate work with others has been most encouraging. We have working agreements with:

American Type Founders.
Eastman Kodak Co.
Dow Chemical Co.
Goss Printing Press Co.
R. Hoe & Co.
Wood Newspaper Machinery Co.
Lithomat Corporation
Mergenthaler Linotype Co.
International Printing Ink Co.

"The reason the list is not longer is because I have not had the opportunity to contact others. We expect to have many more.

"We can streamline our operations and we can reduce operating costs by the in-

BETTER
FASTER
MORE PROFITABLE PRINTING
18,000 MULTICOLOR SHEETS PER HOUR!
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
NO PRESS WASHUP
ROLL PAPER 7-12% CHEAPER
Depend On The Leader
CHAMPLAIN CO., INC.
88 LLEWELLYN AVE., BLOOMFIELD, N. J.
CHICAGO OFFICE: 7 W. Madison St., Chicago 2, Ill.
Rotogravure at its best
5176


'Surface'
TYPE METAL REMELTING FURNACES
A
B
C
'Surface' Gas-Fired Furnaces for type metal remelting are designed to provide the industry with an efficient, rapid melting furnace of long life.
A 'Surface' Type Metal Remelting Furnace equipped with Atmospheric Burner and bottom outlet. Available in capacities up to 5000 pounds of metal.
B Same furnace as A equipped with hood.
C 'Surface' Type Metal Remelting Furnace equipped with Pressure Burner. Standard models available with capacities up to 3200 lbs. of metal.
Write for Bulletin SC-130-A and Specification SV-49
SURFACE COMBUSTION CORPORATION · TOLEDO 1, OHIO

TECHNICALLY

TRAINED

REPRESENTATIVES

of the

HAROLD M. PITMAN COMPANY

will look forward to discussing your Photo Engraving Department Equipment needs.

HAROLD M. PITMAN CO.

CHICAGO · NEW YORK · BOSTON
CLEVELAND · DALLAS

COPPER • ZINC • CHEMICALS • SUPPLIES • EQUIPMENT

LIGHTWEIGHT EQUIPMENT

Made of Magnesium

- Telescopic gravity loading conveyors as used by Milwaukee Journal
- Make-up tables on casters
- Turtles, platforms, steps and ladders
- Design and fabrication of any portable equipment.

MAGNESIUM PRODUCTS of MILWAUKEE
748 W. VIRGINIA ST MILWAUKEE 4, WIS.

BUY AND SPECIFY "AMERICAN"

SYNTHETIC and COMPOSITION ROLLERS
Built for Longer Wear — Better Presswork
AMERICAN ROLLER CO. 1342 N. Halsted St., Chicago 22, Ill.
BRANCH: 225 N. New Jersey St., Indianapolis 4, Ind.

miller *for America's modern pressrooms*

MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

ECONOMY LIFTERS

As used in the printing industry for:

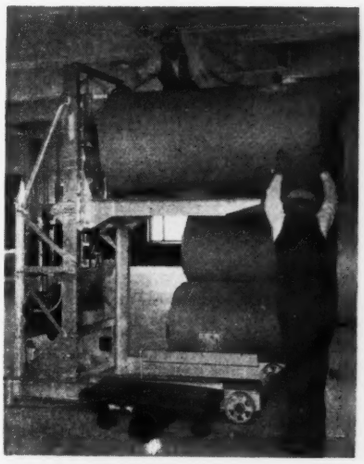
ROLL HANDLING
(any size or weight)

SKID HANDLING

BOXES, FLAT PAPER

BALES, WASTE PAPER

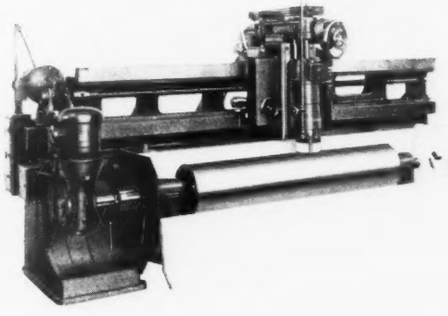
CARTONS



"Handling News Print Rolls"

Other lifters available with capacities of 500 to 5000 pounds. Any platform lift and size. Hand and electric powered hoist units.

ECONOMY ENGINEERING CO.
4501 W. Lake Ave. . . . Chicago 24, Illinois



ROTOGRAVURE

GRINDING AND POLISHING MACHINE

Precision Built to Grind and Polish to .0003"

Manufactured in two sizes, each being able to handle varying diameters and lengths of cylinders. Special Intaglio stones, using a combined concentric and eccentric motion give a smoother surface in shorter time than obtained with other machines. Water as a coolant eliminates all dust. Precision automatic feed—either continual or at end of each traverse—compensates for stone wear while grinding. When polishing cylinders, stone is "floated" with continuous adjustable pressure, resulting in a higher finish than obtained with paper. Variable speed motors permit a choice of grinding and polishing speeds.

STANDARD PROCESS CORPORATION
Manufacturing Gravure Equipment & Supplies
2704 W. Roscoe Street • Chicago 18, Ill.

RICHARDS' STEREOTYPE SAWS

Send For Data

WE BUILD FOUR MODELS

"CLIPPER" ROLLING TABLE

J. A. RICHARDS CO. • KALAMAZOO 60F

"LINSCO" STAINLESS STEEL LINERS

$1.60 EACH

LINO.-INTER.
U.A. REGULAR

Complete line of Linotype and Intertype Parts and Equipment carried in stock at all times.

Send in your order NOW for immediate delivery

LINOTYPE SUPPLY CO., INC.

ESTABLISHED 1914

337 CANAL ST. CAnal 6-0916-7 NEW YORK 13, N.Y.

WRITE FOR PRICES AND SAMPLES

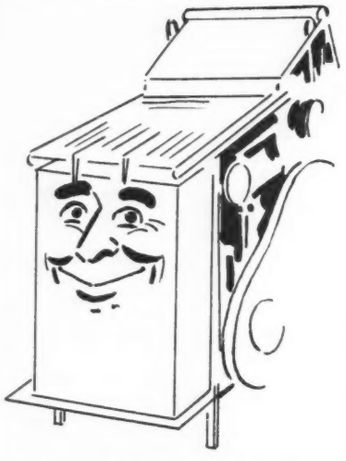
RUBBER PLATE MATERIAL

ADD-A-COLOR

TYPE HIGH OR PATENT BASE

PROCESS COLOR PLATE COMPANY

522 SO. CLINTON ST. CHICAGO 7, ILLINOIS



A good *Press* knows its grease and oil

PRESSMEN—Is your PRESS getting more work today than it did 10 years ago? If you answer YES—YOU need the best lubricants obtainable to keep your press giving maximum performance.

ALBANY TALLOW LUBRICANTS will give YOU maximum performance.

If your Press is equipped with grease cups use ALBANY GREASE No. 3—with pressure fittings. ALBANY SOFT PRESSURE GREASE—if it is oil lubricated. ALBANY VISCOUS PRESS OIL . . . and finally give all gears, cams, chain drives—no matter what press you are using—ALBANY GEAR LUBRICANT NO. 93.

YOUR PRESS WILL SHOW YOU THE ADVANTAGES IN USING ALBANY LUBRICANTS.

Service bulletin No. 10 available on request.

ADAM COOK'S SONS, INC.

Mfrs. of Albany Lubricating Products

LINDEN, NEW JERSEY

stallation of modern methods by utilizing equipment such as teletypesetters and mechanized mailroom operations. Some of you have made these changes and are pleased with the resulting savings.

"Terrific Challenge"

"It is my opinion that those who suggest that a technological revolution is required face the issue most squarely. As I stated last year, I do not believe that it will be a revolution in the sense that a new process will be developed within the next six months which will change our methods completely. The newspaper business has been slow to accept new methods and new techniques. It will continue to be, and not without reason. There are features connected with the use of movable type which make its use particularly adaptable to our functions. Also, the ability to produce multiple stereotype plates at the rate of four per minute and to recover for future use the great majority of the ingredients flaunts a terrific challenge in the face of one who would change the process. I believe the change will come slowly but surely in moderate steps, but nevertheless surely.

Phototypesetting

"The Fotosetter is essentially a standard Intertype machine which substitutes the photographic equipment for the metal pot and molds. Other such machines are in various stages of development. One such machine is now in operating condition, developed in France and presently being developed through the facilities of Lithomat Corp. in Cambridge, Mass. It operates with the use of a standard typewriter keyboard and provides facilities of obtaining many type faces in varying point sizes over an extremely wide range. It is extremely versatile and is being designed in its final form with newspaper production requirements in mind.

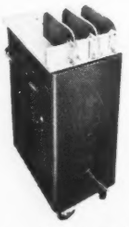
"It is not my purpose at this time to discuss the relative merits of such machines, but to point out to you that in our

SYNTRON

VIBRATING

PAPER JOGGERS

Reduce Jogging Time!



Their 3600 controllable vibrations per minute make short work of difficult papers—eliminate hand pounding and riffling.

Write for Illustrated Folder

SYNTRON CO.

577 Lexington, Homer City, Pa.

. . Announcement . .

"PAT" M. COYNE

Formerly of Coyne & Paddock, Inc.

is now a member of the firm of

COYNE & JACOBS

Division of

Franklin Paper Company and
Russell Products Company

HARRISON BUILDING
PHILADELPHIA, PA.

Have Never failed to meet the exact specifications of the Fourth Estate.

Cork Moulding Blankets, in various densities. All sizes including Double Truck 24" x 36" (one piece). • Cork and Rubber Creepers • Moulding Boards, Fibre and Bakelite-Linen • Direct Pressure Blankets

The above items are furnished in all sizes and gauges.

CLASSIFIED ADS ALL CLASSIFICATIONS

$.75 per line 1.9/16" wide. Minimum ad 5 lines, 25 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue.

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

Two-motor full automatic newspaper press drives and control panels, 220 volt, 3 phase, 60 cycle AC, complete with resistors and push button stations:
2 Cutler Hammer 40/3 HP faceplate type, equipped to parallel.
2 Cutler Hammer 40/3 HP crosshead type, equipped to parallel.
All used, serviceable, being replaced with larger drives. Immediately available.

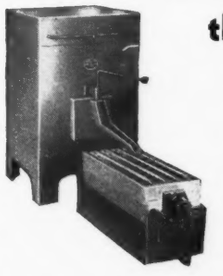
The Eastern Color Printing Company
Waterbury 91, Conn.

FOR SALE: Newspaper has 4 Model AE-20 new varitypers and 1 Model A-20 priced to sell. Reply Box 325, Printing Equipment *Engineer*.

PRESSMAN WANTED

A job is open in one of the finest cities in the South for a young journeyman pressman who is absolutely steady and reliable. Liberal vacation. Life Insurance. Pension plan plus pleasant working conditions. Open shop. Write box 329 Printing Equipment *Engineer*.

A BETTER FURNACE . . . AT A BETTER PRICE



the NOLAN
Metal Remelter

A compact, highly efficient metal remelting furnace. Priced surprisingly low and designed to make your remelting and repigging easier at money-saving speed. Available in 650 lb. and 2000 lb. capacities. Write for Bulletin.

NOLAN CORPORATION
1331 East Dominick St.
ROME, NEW YORK
Builders of BETTER Equipment for BETTER Printing

NEWSPAPER & PRINTING PLANT ENGINEERING

NEW BUILDINGS • MODERNIZATION
SURVEYS • CONSULTATION

ROBERT W. DICKERSON
2063 EAST 4TH STREET • CLEVELAND 15, OHIO

★ **STAR CUT CEMENT** ★
Since 1936 — *For Mounting* — Since 1936
CUTS. .STEREOTYPES...ELECTROTYPES
65c per tube-$5.50 per doz. $5.00 per doz. in two doz. lots, $4.50 per doz. in gross lots.
★ STAR CEMENT COMPANY ★
45 Malone Avenue, BELLEVILLE 9, N.J.

CUT COSTS . . . INCREASE PROFITS!

REGISTERED U.S. PATENT OFFICE
dico
RUBBER PLATE MACHINE

At last printers can make their own rubber printing plates for one-fifth the cost of buying electros or rubber plates from trade makers!
It is practical and profitable for nearly any print shop. Make your own rubber printing plates in a few minutes and take advantage of all the time-saving, cost cutting features. Anyone in the shop can operate it! DICO makes rubber stamps, too!

HUNDREDS OF SATISFIED USERS!
Write today, we will send you free illustrated folder about DICO, which shows both the hand operated and hydraulically operated models.

O. C. HANEY CO. **1206 Maple Ave. Los Angeles 15, Cal.**

PRESS BLANKETS

Tailored to fit the press and printing requirements. Cork, oil-proof synthetic rubber or combination for newspaper, magazine or job work, any press .022 to .151 gauge. . . . *Guaranteed for service; will not mat, stretch or creep.*
ACME PRESS BLANKET CO., 3904 Sheridan Road, Chicago 13

If you do not have copy of our Red Catalogue No. 8, —Newspaper Equipment and Supplies for printing newspapers—your copy is Ready. Send for it now.
AMERICAN PUBLISHERS SUPPLY, INC.
P. O. Box 421, Lynnfield, Mass.

DOYLE Super-Power Infrared
Sheet Dryers
and Vacuum Sheet Cleaners
THE J. E. DOYLE COMPANY
1220 WEST 6th STREET CLEVELAND 13, OHIO

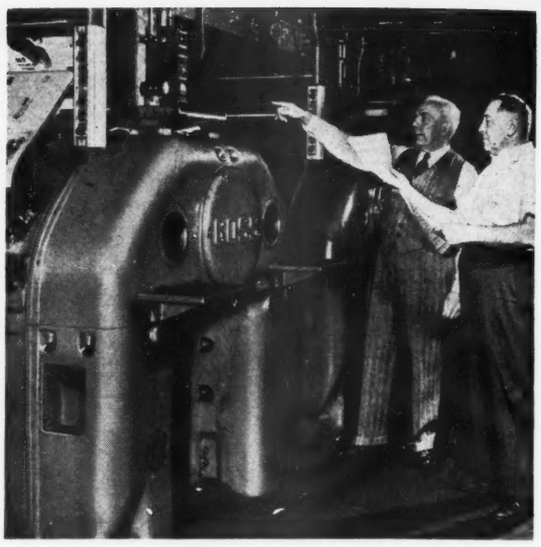
WEB DRYING APPARATUS
for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS
B. OFFEN & CO.
168 N. Michigan Ave. Chicago 1, Illinois

BAUM FOLDERS

RUSSELL ERNEST BAUM
615 Chestnut Street Philadelphia, Pennsylvania

miller *for America's modern pressrooms*
MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

thinking such machines appear to have a definite place in our reproduction methods in the not too distant future. However, if these machines are to be utilized, the preparation time required to put the finished plate on the press must be greatly reduced. Offset plates are being made available which can be prepared for the press in from 2½ to 6 min. each. Dry offset plates, and such a process seems feasible, must be capable of preparation within the same period of time. Even more important, relief plates which can utilize our present printing equipment must be capable of being prepared, including complete etching, in 5 min. or less per plate. This is our goal in this particular project and it is not impossible to achieve. Such plates can be prepared either by speeding up the normal and commercially used acid etch process, or by the development of an entirely new process. The Perry Brothers in their work at Ocala, Fla., which has continued quietly over the last year, are now engraving full page size magnesium plates at the rate of 10 per hr., or an average of 6 min. per plate for a reproduction process which utilizes the original engraving on the press."



Louis W. Woelfel, Mechanical Supt., Buffalo *Evening News*, (left) and George Haas, Pressroom Foreman, examine the new Goss Headliner press.

Recent Goss Installations

THE recent installation of 12 Goss Headliner units and three pairs of Uniflow, double delivery folders at the Buffalo *Evening News* will complete the addition of 24 Goss units and 6 pairs of folders put in over a period of ten years. Mechanical superintendent at *The News* is Louis W. Woelfel. The new press is so designed that color arrangements can be added at any time.

ADVERTISERS' INDEX FOR JUNE 1949

P. E. E. Representatives:

WILLIAM L. OSBORN, Eastern Manager, 1728 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.

EUGENE A. POWERS, Midwest Manager, 612 N. Michigan Ave., Chicago 11, Ill. Phone: SUperior 7-2444

ROBERT C. CRAIG, West Coast Representative, 601 S. Vermont St., Los Angeles 5, Calif. Phone: FAirfax 1363

Abrams, The M. L. Co....113
Acme Press Blanket Co....119
American Gas Association....18
American Publishers Supply, Inc....119
American Roller Co....117
American Steel Chase Co....112
American Type Founders, Inc. Insert between pages 40, 41
Atlantic Zinc Works....94

Baum, Russell Ernest....119
Beveridge Paper Co....32
Bingham Brothers Co....15
Bingham's, Sam'l, Son Mfg. Co.... 4
Blatchford, E. W., Co....19
Booth, The E. A., Rubber Co....101
Burgess Cellulose Co....41

Capital Tool & Mfg. Co....111
Certified Dry Mat Corp....29
Challenge Machinery Co., The....113
Champlain Co., Inc....101, 112, 114, 116
Chandler & Price Co., The.... 8
Chemco Photoproducts Co., Inc....24
Cline Electric Mfg. Co....47
Consolidated Photoengravers Equipment Co...93
Cook's, Adam, Sons Co....118
Cottrell, C. B. & Sons Co....85
Coyne & Jacobs Div., Franklin Paper Co....118
Coyne and Paddock, Inc....115
Cromwell Paper Co....107

Dayton Rubber Co....39
Dexter Folder Co....16
Dickerson, Robert W....119
Doyle, J. E., Co....119

Eastern Newspaper Supply....40
Eastman Kodak Co....91
Economy Engineering Co....117
Edes Mfg. Co., The....102
Electric Boat Co., Printing Machinery Div....53
Elwell-Parker Electric Co., The....17

Federated Metals Div., American Smelting & Refining Co....11
Fisher Furnaces Div., Lindberg Engineering Co.26
Foster Mfg. Co....97

General Electric Co....31
Goss Printing Press Co., The....46
Griffiths, John, Co., Inc....97

Hamilton Mfg. Co....100
Hammond Machinery Builders, Inc Inside back cover
Haney, O. C., Co....119
Harris-Seybold Co....Inside front cover
Herrick, William C., Ink Co., Inc....21
Hess & Barker....107
Hoe, R. and Co., Inc....50, 51
Huber, J. M., Corp....52

Ideal Roller & Mfg. Co....23
Imperial Type Metal Co....22, 44
Infra-Matic Products Co....115
International Printing Ink Div., Interchemical Corp....45
Intertype Corporation....Outside back cove

Jampol Co., The....38
Johnson, Charles Eneu, & Co....105

Kellogg Switchboard and Supply Co....103
Kemp, C. M., Mfg. Co....10
Kimble Electric Div., Miehle Printing Press & Mfg. Co....114

Lake Erie Engineering Corp....95
Lanston Monotype Co....33
LeBlond, R. K., Machine Tool Co....35
Linotype Parts Co....42, 96
Linotype Supply Co., Inc....118
Ludlow Typograph Co.... 7

Magnesium Products of Milwaukee....117
Margach Mfg. Co., Inc....27
Matrix Contrast Corp....54
Mergenthaler Linotype Co....88, 89
Mezo-Steele Co., The....97
Miller Lauffer Printing Equipment Corp....43
Miller Printing Machinery Co....117, 119
Mohr Lino-Saw Co....115
Monomelt Co., The, Inc....104
Montgomery Company, Inc....105
Morrill, Geo. H.—General Printing Ink Div., Sun Chemical Corp.... 1
Morrison Co., The....12

National Association of Printing Ink Makers...25
New England Newspaper Supply Co....34
Nolan Corporation....119

Offen, B., & Co....119
Ostrander-Seymour Co....13

Pereira, Morton L., & Associates....114
Pitman, The Harold M., Co....116
Printing Equipment Corp....98
Process Color Plate Co....118

Reilly Electrotype Co....14
Richards, J. A., Co....117
Rouse, H. B., & Co....99, 108

Scott, Walter & Co.... 6
SKF Industries, Inc....28
Sta-Hi Corp....2, 3
Standard Process Corp....117
Star Cement Co....119
Star-Times Publishing Co....110
Stereotex Machinery Co....111
Streamline Metal Feeder Co....103
Superior Fixture Co....115
Surface Combustion Corp....116
Syntron Company....118

Teletypesetter Corporation....106
Timken Roller Bearing Co., The....49
Tingue, Brown & Co....36
Toronto Star, The....37

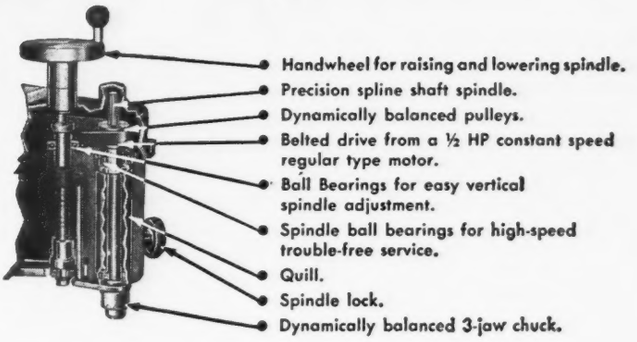
United American Metals Corp....30

Vandercook & Sons, Inc....20
Vulcan Proofing Co....48

Wood Flong Corp....109
Wood Newspaper Machinery Corp....9

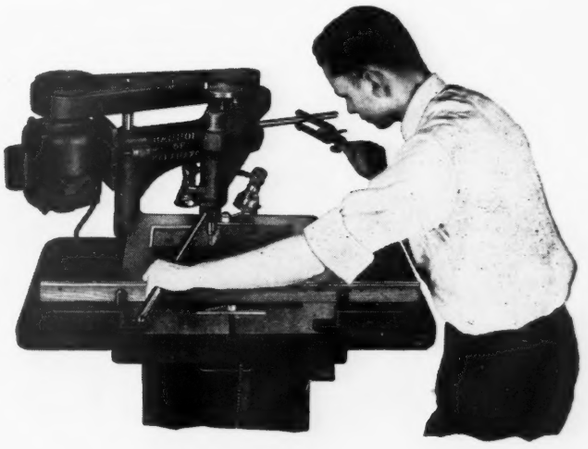
HAMMOND *Radial Router*

1 **A BALL BEARING SPINDLE WITH BELTED DRIVE FROM A ½ HP REGULAR TYPE, CONSTANT SPEED MOTOR.** The ball bearing spindle runs at 12,000 RPM. The pulleys and other parts are dynamically balanced for smooth, vibration free operation.

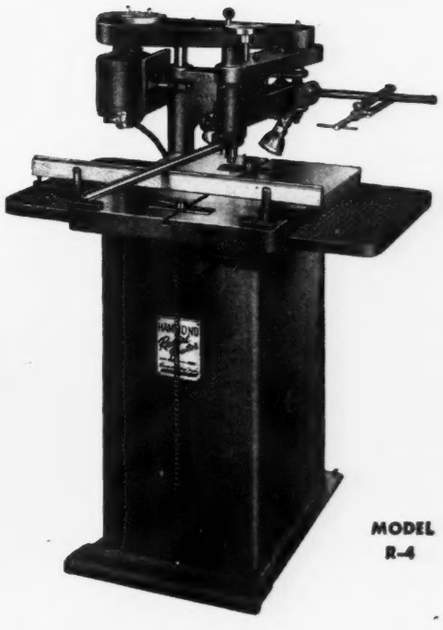

Handwheel for raising and lowering spindle.
Precision spline shaft spindle.
Dynamically balanced pulleys.
Belted drive from a ½ HP constant speed regular type motor.
Ball Bearings for easy vertical spindle adjustment.
Spindle ball bearings for high-speed trouble-free service.
Quill.
Spindle lock.
Dynamically balanced 3-jaw chuck.

HAMMOND ROUTER HEAD

2 **THE GOOD "FEEL" AND SENSITIVITY THE OPERATOR NEEDS.** Radial arms are of large section for rigidity and of aluminum for lightness. They are supported from and pivot on a ball and needle bearing post. The excess weight of the front arm and spindle is transferred to the back arm and post by a spring and lever bridge to give good "feel" and sensitivity.



3 **A GOOD** *Radial Router* **AT MEDIUM PRICE.** The Hammond Radial Router is fully powered, ruggedly and sensitively built and has full-page capacity, providing a good Radial Router at Medium Price. **Write for complete information — there's no obligation.**

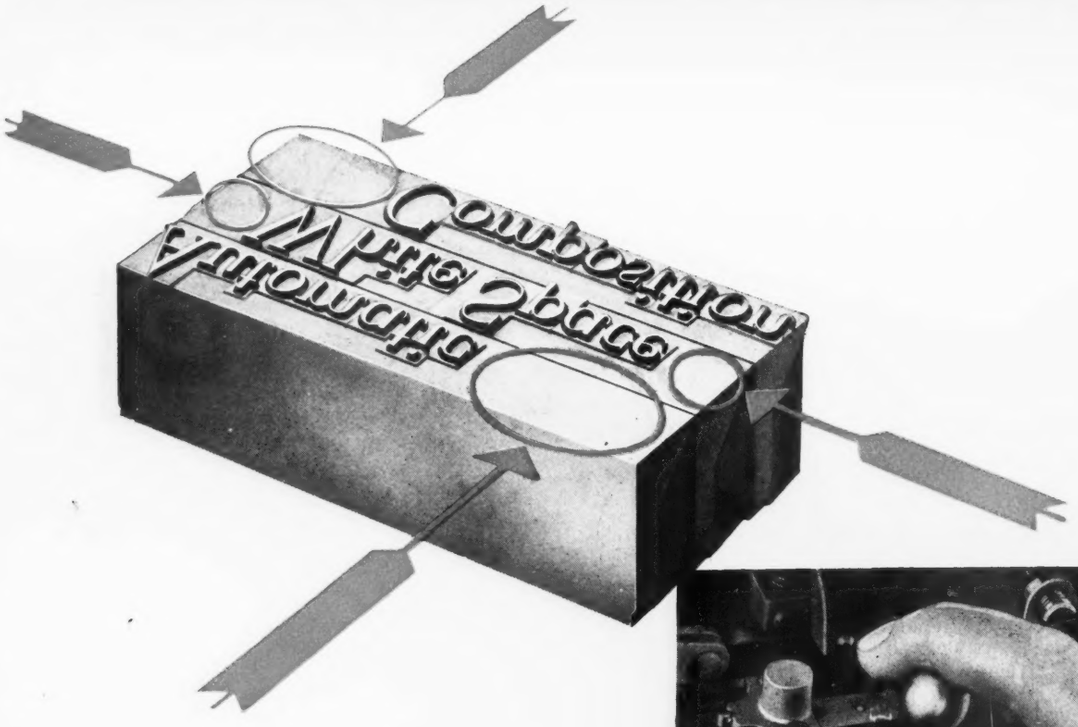


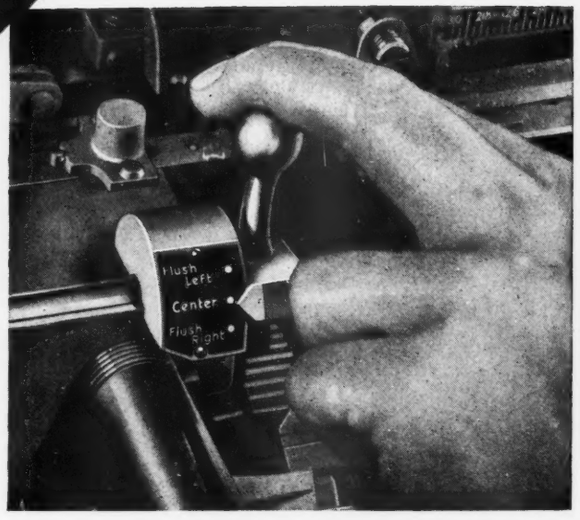
MODEL R-4

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

How to set WHITE SPACE at a profit





Setting White Space . . .

a substantial part of the average composition—is AUTOMATIC *on Intertype Line-Composing Machines equipped with the convenient Autospacer.* ⟿

There's no lost motion . . . no fumbling with mats . . . no need to transfer quads or spacebands. Whether the line is long or short, text or display, with or without spacebands, the operator merely sets a handy knob.

Lines are automatically quadded left, centered or quadded right by the simple, dependable *Autospacer* . . . and without disturbing the normal functioning of the machine.

With the *Justified Indention* feature, matter may be indented at either or both ends—equally or unequally—and set at straight matter speed.

Pioneered by INTERTYPE, the *Autospacer* has been a major contribution to composing room efficiency and economy. You'll find all the facts on "Intertype Automatic Quadding and Centering" in an interesting 12-page booklet. Write to your nearest Intertype office for a copy.

TEXT IN WAVERLEY

Look to Progressive INTERTYPE®

INTERTYPE CORPORATION

BROOKLYN 2, NEW YORK, N. Y.